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ABSTRACT

This curriculum guide for vocational teacher education focuses on the reality of learners and specifically on how to help teachers understand how societal conditions and stereotyping affect youth in the public schools. Introductory materials include a project overview, mission and goals of the curriculum, belief statements, curriculum format, information on preparation and time issues, definition of new basic skills, and a guide to lesson categories. This book contains four lessons: Social Conditions of Youth; Learning Styles; Special Populations; and Teaching the Adult Learner. Each lesson format is identical, and each category within a lesson has its own icon, for ease in locating the category in any lesson. Lesson categories are as follows: (1) perennial problem (for this curriculum, what should be done about integrating the new basic skills into vocational education?); (2) practical problem (action that can help address the perennial problem); (3) justification for lesson; (4) learner outcome; (5) instructor resources; (6) teaching strategy modeled; (7) lesson plan (content, new basic skills, process, application objectives); (8) teaching-learning interaction (introduction and steps to guide the teacher educator through the lesson); (9) debriefing strategies (options for summarizing the lesson); (10) evaluation options; and (11) individualized learning plan. Handouts are provided at the end of each lesson. An instructor resources section at the end of the book contains transparencies and handouts suitable for photocopying. (YLB)

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VOCATIONAL
TEACHER
EDUCATION

Integrating
Basic Skills Into
Vocational Teacher
Education Curricula

REALITY OF LEARNERS

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& Educational Studies
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REALITY OF LEARNERS

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Integrating Basic Skills into Vocational Teacher and Counselor Education Curricula

PROJECT OVERVIEW

The goal of this project was to develop, field test, and disseminate curricula that would help preservice vocational education teachers and school guidance counselors learn how to integrate basic skills instruction into their work. One curriculum was designed for use by vocational teacher educators, the other for school guidance counselor educators.

The project staff followed four steps in developing these curricula. First, the staff developed field test materials with the help of two Working Group teams of national experts. (The Working Groups assisted throughout the project, identifying competencies, suggesting field test sites, recommending and helping to locate potential curriculum materials, reviewing materials chosen for inclusion in the curricula, and guiding the dissemination of draft curricula to field test sites.) Second, the project staff compiled two reviews of literature, one in vocational teacher education and the other in school counselor education, to help identify decisionmakers' current views on the importance of teaching basic skills to secondary and postsecondary students preparing to enter the workforce. Third, the project staff conducted site visits at nine vocational teacher education and nine school counselor education institutions. The Working Groups had identified these institutions as sites in which some emphasis was being given to basic skills in preservice curricula. Finally, the project staff used Working Group comments, the literature reviews, and the results of their site visits to produce draft sets of the two new basic skills curricula.

The project staff then field tested the draft curricula at nine teacher education and nine school counselor education institutions. (None of these were the same institutions at which site visits had been made.) At each field test location, project staff members worked with a Site Liaison to integrate the draft curricula into existing vocational teacher or school counselor education instruction. The project staff used the resulting field test reports to improve the lessons, formats, and teacher instructions of the new basic skills curricula.

Final versions of the two curricula have been sent to all site visit and field test locations and to major curriculum clearinghouses and teaching-materials dissemination sites. Information about the curricula has been sent to vocational and industrial teacher education programs and school counselor education programs nationwide. The procedures used in developing the curricula will be reported to major journals in vocational, counselor, home economics, industrial, and technology education. These procedures will also be summarized at presentations to state, regional, and national conferences in the same professional areas.

ACKNOWLEDGEMENTS

A United States Department of Education Contract through the Office of Vocational and Adult Education provided the funding for the development and production of this Integrating Basic Skills curriculum. The staff in the Office of Vocational and Adult Education provided valuable input and support. Special thanks for the leadership provided by Jackie Friederich, Richard Di Cola, Bernice Anderson, Laura Johns, Gisela Harkin, and Susan Webster.

Faculty and staff at Colorado State University, and particularly in the College of Applied Human Sciences, have been willing to provide necessary technical skills and assistance whenever needed throughout the contract. The School of Occupational and Educational Studies and the Department of Industrial Sciences were particularly instrumental in the success of this curriculum effort.

The Integrating Basic Skills curriculum was developed and written with guidance from experts in the field who have shown commitment and dedication to integrating basic skills into vocational education. We sincerely thank the members of our Working Group for their contributions. The members of the Teacher Education Working Group were: Kay Clayton, A & I University, Kingsville, TX; George H. Copa, University of Minnesota, Minneapolis, MN; Thomas H. Crumbaker-Smith, Boltz Junior High School, Fort Collins, CO; Jim Hubbard, Colorado Alliance for Science; Michael W. Neden, Delta County Schools, Delta, CO; Leno S. Pedrotti, Center for Occupational Research and Development, Waco, TX; L. Allen Phelps, University of Wisconsin—Madison, Madison, WI; Jane Plihal, University of Minnesota, Minneapolis, MN; and Sally Yahnke, Colorado State University, Fort Collins, CO.

Vocational teacher education programs at universities across the country assisted as visitation and field test sites. The input provided by both groups expanded and improved the final product. We are indebted to faculty, teachers, and students at the following institutions for the insights they shared.

Teacher Education Sites: Bemidji State University, Corpus Christi State University, Idaho State University, Illinois State University, Indiana University of Pennsylvania, Michigan Consortium, North Carolina Central University, Northwest Regional Educational Laboratory, The Ohio State University, University of California—Long Beach, University of Georgia, University of Maryland, University of Minnesota, University of Missouri, University of Wyoming, and Virginia Polytechnic Institute and State University.

During our site visit to the University of Maryland, Dr. Francine Hultgren shared the Perennial and Practical Problem approach used in the Home Economics Curriculum in Maryland. This was a turning point for our curriculum effort. We hope our curriculum model reflects the impact of Dr. Hultgren's work.

Dr. Donald Cruickshank, Professor Emeritus from The Ohio State University, graciously permitted us to use two Reflective Teaching Lessons. We hope that this curriculum project helps teachers and teacher educators reflect on their teaching in the manner which Dr. Cruickshank modeled so well.

The School of Occupational and Educational Studies at Colorado State University has an integrated faculty of vocational and general educators. The vocational teacher educators on this contract want to recognize the contributions of our general education faculty member, Dr. Barbara Nelson. Barbara's expertise in teaching models and lesson planning enhanced the curriculum and increased our commitment to the integration of vocational and general teacher education.

The leadership, guidance, and support provided by Dr. R. Brian Cobb, Project Director, facilitated our work on the project. Dr. Nancy Hartley and Dr. Jaime Stefan, Project Coordinators, kept progress running smoothly as we traveled and wrote. Dr. Joseph Daly and Dr. Rich Feller provided insights into the counselor's role in integration as we worked as an integration team.

In the two years in which we have been working, many people have been an important part of this team effort. Staff, graduate students, and student workers have contributed time and energy. Special thanks to: Len Albright, Bart Beaudin, Betty Bloom, Sheila Bowman, Lynn Butler, Susan Cipolla, Barbara Cisneros, Terry Deniston, Jackie Friederich, Jody Gerst, Betty Grant, Stephen Jaouen, Nathalie Kees, Katy Koenen, Jean Lehmann, Jon Lewis, Jeff Lovejoy, Dawn Mallette, Carmen Manning, Laura McIntyre, Fawn Milliken, Laura Myers, Kathy Phifer, Laurie Pierce, Tracey Seltzer, Dee Spaulding, John Sutton, Janet Trever, and Ron Warren. We appreciate the efforts of each of you.

Cathleen T. Love and Gene W. Gloeckner

MISSION AND GOALS

Mission Statement

☑ The mission of this vocational education curriculum is to empower preservice teachers with the skills necessary to model, plan, and facilitate the acquisition of the new basic skills necessary for learners to be successful family members, workers, and learners.

Goals

- ☑ To develop understanding of the new basic skills.
- ☑ To generate integrated efforts to assist learners in achieving new basic skills.
- ☑ To develop understanding of the multiple roles learners play in their work, family, and educational lives.
- ☑ To promote public school teachers as leaders in school reform.
- ☑ To develop an appreciation of the forces affecting change in the public school system.
- ☑ To model through the teacher education program the integration of basic skills into the curriculum.

Perennial Problem

What should be done about integrating the new basic skills into vocational education?

BELIEF STATEMENTS

The following beliefs guided the development of the curriculum.

We Believe:

☑ The teacher is no longer a "walking encyclopedia." The teaching-learning model no longer resembles an assembly line in which the student enters kindergarten and progresses through the system in a "linear" fashion with "parts" being added to create a complete product. Instead, the teaching-learning model focuses on integrating content and process so that the teacher is a facilitator of learning.

☑ It is the responsibility of vocational teachers to assume a leadership role in the facilitation of the change process from the assembly line model to an integration model.

☑ The vocational teacher educator is a role model for the preservice teacher in curriculum areas such as these: the teaching of basic skills, teaching methods and content, evaluation techniques, and the value placed on positive learner outcomes.

☑ The preservice teacher is capable of developing the basic skills, teaching methods and content, and evaluation techniques necessary to facilitate positive learner outcomes in the vocational classroom.

☑ The vocational teacher must have ownership of the new basic skills to model those skills.

☑ Debriefing of each lesson is key to enabling the preservice teacher to internalize the concepts of the lesson.

☑ Learning to know must never be separated from learning to do. Knowledge is derived from both content and process. The acquisition of knowledge requires the active participation of the learner. Knowledge is dynamic, it is continuously reconstructed by the learner, and it is affected by constant change.[1]

☑ The aim of education is to develop individuals who are active participants in the acquisition of knowledge and in the formation of healthy systems in a democratic society.

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[1] Adapted form Hultgren, F. (Project Director). (1989). A conceptual guide framework for home economics curriculum in Maryland. College Park, MD: University of Maryland.

CURRICULUM FORMAT

The curriculum has been organized into five books and a review of literature. The review of literature can be used as an instructor resource in preparing to teach this curriculum and/or as a reading for students.

Each lesson developed for the vocational teacher education Integrating Basic Skills curriculum was written to stand alone. No lesson requires that students have participated in a prior lesson in the curriculum to understand the lesson you choose to teach. However, Book One, The Initial Steps, offers a knowledge base for the integration of basic skills if your students are unfamiliar with the concept.

The chart which follows summarizes the five curriculum books. The titles of the lessons in each book are provided in the second column. The last column states the practical problem that each lesson addresses.

Teacher Education Curriculum

BOOK	LESSON	PRACTICAL PROBLEM
One: The Initial Steps	Conceptualizing Basic Skills	What should be done to help teachers own the new basic skills?
	Models of Integration	What should be done to help teachers own integration?
	Keys to Integration	What should be done to promote the integration process and help remove the natural competitive barriers within schools?
Two: Changing Attitudes	Affective Domain: Changing Attitudes	What should be done to help teachers better understand how to assess student attitudes?
	Lifelong Learning	What should be done to help motivate future teachers to maintain their quest for knowledge and to broaden their concept of education beyond classroom learning?
	Student/Teacher Expectations	What should be done to help teachers recognize how student and teacher expectations affect learning?

BOOK	LESSON	PRACTICAL PROBLEM
Three: Reality of Learners	Social Conditions of Youth	What should be done to help teachers understand how societal conditions and stereotyping affect youth in the public schools?
	Learning Styles	What should be done to help teachers respond to the learning style differences of their students?
	Special Populations	What should be done to help teachers facilitate the success of *all* students in their classrooms?
	Teaching the Adult Learner	What should be done to help teachers better understand the needs of the adult learner?
Four: Change in the Public School	School Reform	What should be done to help teachers understand the school reform movement?
	Rules, Roles, and Relationships in Schools	What should be done about "turf" issues between vocational and academic education?
	Dynamics of Change	What should be done about recognizing the impact of information age technology on the learner's preparation for work, family, and further education?
	Partnerships: Involving the Community	What should be done to help teachers build relationships with healthy boundaries for themselves and others?
Five: Challenges for the Teacher	The Curriculum Challenge	What should be done to help teachers accept change as a constant in curricula?
	School Culture	What should be done to facilitate integration of the new basic skills given the power structure that exists in the public schools?
	Modeling Integration of Work and Family	What should be done to help teachers recognize how making personal lifestyle choices requires similar skills as making professional choices?

A similar set of materials has been produced by Dr. Richard W. Feller and Dr. Joseph L. Daly in the area of School Counselor Education. All materials are available by writing to: School of Occupational and Educational Studies, Education Building, Room 209, Colorado State University, Fort Collins, CO 80523.

PREPARATION AND TIME ISSUES

Preparation Time

Faculty who field tested these materials recommend **at least one hour** of preparation for each lesson. Although you are acting only as a facilitator in these lessons, the content and teaching strategy may be new and/or different. Taking the time to prepare will foster delivery of both the content and process. It is particularly important to note that some lessons have an assignment that must be given to students the day prior to the lesson.

Each lesson contains a list of the materials needed to teach the lesson, and copies of any transparencies or handouts which are part of that lesson. Be sure to check for any additional teaching materials, e.g., audiovisual equipment, flipcharts, etc., which are needed to facilitate the lesson.

Time For Lesson Plan Delivery

In the field testing of the curriculum, these lessons were offered in classes which ranged in time from one to three hours. The students who were part of the field testing were adamant about the need to allow students time to discuss the topics in each lesson. Often the discussions were seen as critical to the lesson impact.

Lesson content and process throughout this curriculum are driven by the needs and interests of the students. You know the unique needs and interests of the students with whom you are working. As you review the lesson, think about the time your students will need to experience the lesson, and divide the steps in the Lesson Plan into time allotments which meet the needs of your students.

Transparencies and Handouts

Transparencies and handouts are duplicated at the end of each book, in the Instructor Resources section. The transparencies and handouts can easily be pulled out of this section and photocopied.

NEW BASIC SKILLS DEFINED

Basic skills are often defined as skills that were once referred to as the academic skills of reading, writing, and arithmetic. However, studies conducted during the last decade have focused on a broader definition of basic skills. The lack of these "new basic skills" has been associated with America's decline in productivity.

As part of the U.S. Department of Education project that funded the development of this curriculum, an extensive literature review was completed: Integrating Basic Skills into Vocational Teacher Education Curricula: Review of Literature, (Gloeckner, G., Cobb, B., Love, C., & Grant, B.).[2] One goal of the literature review was to provide an operational definition of the "new basic skills" for vocational teacher education. The authors sought to answer the question, *What knowledge and principles in liberal arts and occupational skill training help lead to success in work, family, and education?* The literature supported ten categories of new basic skills. In this curriculum, the new basic skills are defined as the knowledge and skills associated with these ten categories:

1. Learning to Learn
2. Reading, Writing, and Mathematics
3. Communication
4. Adaptability (creative and critical thinking and problem solving)
5. Personal Management (self-esteem, goal setting/motivation, and personal/career development)
6. Group Effectiveness (interpersonal skills, negotiation, and teamwork)
7. Influence (organizational effectiveness and leadership)
8. Technology
9. Science
10. Home/Family Management and Relationships

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[2] Copies of the complete literature review are available from: School of Occupational and Educational Studies, Education Building, Room 209, Colorado State University, Fort Collins, CO 80523.

GUIDE TO LESSON CATEGORIES

Each lesson format is identical, and each category within a lesson has its own icon, for ease in locating the category in any lesson. Lesson categories are described below.

Perennial Problem

A Perennial Problem is one faced over and over by successive generations of teachers. Perennial Problems include enduring questions about how to improve the quality of education. Posing curriculum lessons as Perennial Problems avoids focusing on time-specific problems. Developers of this curriculum have used the Perennial Problem approach throughout the curriculum. This approach provides a convenient framework for addressing issues involved in integrating new basic skills into vocational education.

The Perennial Problem informing this curriculum is: **What should be done about integrating the new basic skills into vocational education?**

Practical Problem

A Practical Problem identifies an action that can help address the Perennial Problem. This action is born of reasoned thought and sound judgment. Posing a Practical Problem in a curriculum is a way of focusing on both affective and cognitive processes, on both knowledge and values, on life experiences, and on thought and action. The Practical Problem approach can be used to help analyze a teaching situation, identify and address an education dilemma, generate and critique alternatives, and make value judgments.

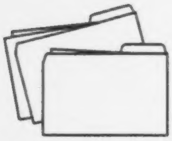
Justification for Lesson

To develop this curriculum, teachers integrating the new basic skills into vocational education were asked the question, "What would you have liked to have studied/discussed in your preservice education that would have prepared you to do a better job of integrating these skills into your work?" Their responses framed the lessons developed. The Justification for Lesson describes the contribution each lesson can make in preparing teachers for integrating the new basic skills into vocational education.

Learner Outcome

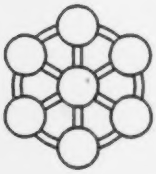
A Learner Outcome is a competency, level of knowledge, or quality that students should be able to demonstrate when they complete the lesson. Outcome-based education requires organizing the curriculum so that all students can reach the outcome. It demands a different approach to pedagogy, with emphasis on active modeling, expecting success, intensive engagement, diagnostic assessment, and frequent feedback to students.

Instructor Resources



This section lists all materials and supplies needed for the lesson, and gives guidelines for copying, adapting, and distributing necessary resources.

Teaching Strategy Modeled

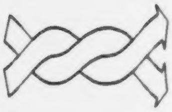


Because knowledge is derived from both content and process, the teaching strategy modeled in the delivery of each lesson is critical to the expected outcome. A short synopsis of the "what," "why," "when," and "how" for each strategy is provided as a handout in each lesson. If you are unfamiliar with the teaching strategy, there is a source given on the handout for further exploration.

Lesson Plan

The Lesson Plan provides the content, new basic skills, process, and application objectives for each lesson. The step-by-step delivery of the lesson is given in the Teaching-Learning Interaction and the Debriefing. The final part of the Lesson Plan offers options for evaluation.

Teaching-Learning Interaction

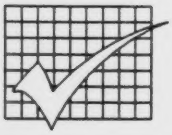


The Teaching-Learning Interaction is the heart of the Lesson Plan. It includes an introduction and a series of steps to help guide the teacher educator through the lesson.

Debriefing Strategies

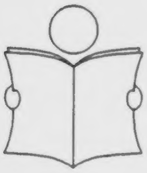
Debriefing Strategies are options for summarizing the lesson. In teacher education classes, students need the opportunity to discuss the content learned and the process (teaching strategy) in which they learned it. In addition, students are given the opportunity through debriefing to analyze what new basic skills they were practicing while participating in the lesson.

Debriefing helps education students critically examine how this lesson applies to their role as vocational teachers. Debriefing is an important part of the Lesson Plan. Planning time for debriefing is essential.



Evaluation Options

Evaluation Options for each lesson are based on the lesson's content, process, and application objectives. These options are meant to be adapted to meet the needs of your students.



Individualized Learning Plan

The plan for individualizing the lesson was provided by field test sites with individualized programs. The demonstration of competency required in the Individualized Learning Plan is the teaching of the lesson to a designated group.

SOCIAL CONDITIONS OF YOUTH

Perennial Problem

What should be done about integrating the new basic skills into vocational education?

Practical Problem

What should be done to help teachers understand how societal conditions and stereotyping affect youth in the public schools?

Justification for Lesson

All students deserve an education that guarantees acquisition of the new basic skills — the keys to future effectiveness at work, at home, and in the community. But many of today's youth must overcome significant roadblocks — adverse societal conditions and negative labeling of themselves by peers and authority figures — before they can acquire these essential skills. Idealistic new teachers leaving the university setting for their first teaching assignments can be more effective if they enter the classroom aware of the real world forces working against many of their students.

Learner Outcome

The learner will develop a critical consciousness regarding the social conditions of students.

The learner will examine his or her own preconceptions regarding individual students' potential for acquiring the new basic skills.

Instructor Resources

Handouts:
The Socioeconomic Conditions of Youth (9 pages)
Taba Inductive Thinking Strategy
Transparency:
All Students Are Valuable to Society!

Teaching Strategy Modeled

Taba Inductive Thinking Strategy

LESSON PLAN

Objectives:

Content:
The learner will investigate how students are labeled by people in school.

The learner will investigate how labels affect teachers', counselors', and students' choices in selecting vocational or academic courses.

The learner will better understand the social conditions of students.

New Basic Skills:
The learner will identify the new basic skills practiced in this lesson.

Process:
The learner will evaluate the Taba Inductive Thinking Strategy.

Application:
The learner will be able to relate this lesson's content to the experience of teaching in an environment in which stereotyping and labeling impede students' progress.

Teaching-Learning Interaction

Introduction:
Ask the students to draw a sketch of one or more of the following:

A jock
A nerd
A cheerleader

Explain that artistic ability is not important and that they will not be graded on this activity.

After students have had a few minutes to sketch, have them share their sketches with the rest of the group. What stereotypes are evident in the sketches? Where do the stereotypes come from?

Learning Activities:
Step 1:
Enumeration and Listing: Have the students develop a list of stereotypical words and phrases that youth hear frequently in school. If the students have difficulty getting started, use the list of examples given:

Examples:

"You come from a single parent family."
"You're a good athlete because you're black."
"You're so fast you remind me of Speedy Gonzales."
"You must be adopted."
"Children like you are not worth my time."
"Do you need to be on the School Lunch Program?"
"Can you afford to go on the field trip with us?"
"Flunk any tests today?"
"You're one of the best students I have ever had."
"Your people do not value education."
"Why are you taking vocational education?"
"As a boy, are you sure you want to take a child development class?"
"When you are a wife and mother, will you need a computer-aided drafting class?"
"When are you planning to drop out?"
"Even you know better than that."

Teaching-Learning Interaction, continued

Step 2:
Grouping: Ask the class to group the phrases they generated into two to four categories that project similar feelings.

Possible Higher-order Questions:

1. Which of these words and phrases seem to belong together?
2. Which of the phrases seem to project the same feelings?
3. What criteria are you using to group these phrases?
4. How are the phrases in this group similar?
5. What characteristics do they have in common?
6. Do you want to change any phrases from one group to another?

Step 3:
Pass out the 9-page handout titled The Socioeconomic Conditions of Youth. After the students review the handout, ask them to identify possible connections between phrases identified and grouped in Steps 1 and 2 and the data presented in the handout.

Sample questions to explore relationships:

1. What are the underlying assumptions made when statistics are presented?
2. What labels are perpetuated by socioeconomic statistics?

Sample questions to make inferences:

1. What effect does stereotyping have on individual students?
2. If students' differences were accepted as strengths, what impact would this have on their performance in school?
3. How does stereotyping affect students' selection of vocational or academic programs?

Teaching-Learning Interaction, continued

Step 3, continued
Sample questions for predicting consequences:

1. What can a teacher do to negate or reduce the impact of labeling?
2. What would the impact be if public schools required all students to take a variety of both liberal arts and vocational courses?
3. What would happen if teachers had high expectations of *all* students?
4. What would happen if students had high expectations of *all* teachers?
5. What would happen if teachers built on student strengths?

"All Students
Are Valuable
to Society!"

Transparency 1

Step 4:
Interpretation: Show the transparency titled All Students Are Valuable to Society! Ask students to interpret what this means to them as teachers.

Debriefing Strategies

Content:
Ask the following questions:

1. How does stereotyping inhibit students from learning the new basic skills?
2. Have you or do you know others who have experienced stereotyping?
3. Were the statistics in the handout surprising to you?
4. What are some ways that we can help each other avoid the use of sexist, racist, and other discriminatory language?
5. How do jokes perpetuate stereotypes?
6. Why do we laugh at racist or sexist jokes?

Debriefing Strategies, continued

New Basic Skills:
During the lesson today, what new basic skills did you practice?

- Adaptability
- Communication
- Learning to learn
- Group effectiveness
- Influence
- Home/family management and relationships

Process:
Distribute the handout titled Taba Inductive Thinking Strategy and ask the following questions:

1. What are the advantages and disadvantages of the Taba Inductive Thinking Strategy?
2. What did you like and dislike about the strategy?

Evaluation Options

Content:
Have students write a one page, self improvement guide to reducing their use of labels and stereotypes. Have students identify how discriminatory language and behavior can become part of subconscious thinking. Ask them to share ideas on teaching students that using discriminatory language and behavior is a choice that can be consciously changed.

Process:
Have students develop a lesson plan that uses the Taba Inductive Thinking Strategy.

Evaluation Options, continued

Application:
Have students visit a public school. Have them observe and listen to interactions among students, teachers, and administrators. Ask your students to document their school visit in a journal format. Did they see or hear labeling? Did the public school students seem to recognize that they had been labeled? What were your students' personal reactions to the labeling they heard? Did academic and vocational students and teachers use different language (both verbal and nonverbal), depending upon whom they were interacting with?

Individualized Learning Plan

If a student is learning this content in an individualized program, the student should be given the entire lesson. The student should read all materials. The college supervisor will designate which Evaluation Options will be required of the student. To demonstrate competency, the student should prepare to teach the lesson to a group designated by the college supervisor. Suggestions for such groups include: teacher groups, service organizations, youth groups, etc.

The Socioeconomic Conditions of Youth

FROM: Hodgkinson, Harold. (1991, September). Reform versus reality. Phi Delta Kappan, 73(1), 8-16.

- ☑ Since 1987, one quarter of all preschool children in the U.S. have lived in poverty.
- ☑ 350,000 children are born each year to mothers who are addicted to cocaine during pregnancy.
- ☑ Today, at least 15 million children are being reared by single mothers whose individual incomes average $11,400. (The average family income for a married couple with children is approximately $34,000 a year.)
- ☑ The nuclear family with a father who works, a mother who stays home with the children, and two children in school represents only 6% of families today.
- ☑ One quarter of pregnant women receive no prenatal care in the crucial first trimester. If these women received one examination during this time, we would have 20% fewer handicapped children in schools.
- ☑ About two million children are latchkey children. They have no adult supervision after school until an adult returns from work.
- ☑ Every night, 50,000 to 200,000 children are without a home. Families with children accounted for 40% of shelter use in 1988.
- ☑ Since 1970, there has been a 678% increase in children being raised by mothers who never married; 2.5 million fathers are raising children alone.
- ☑ Only one quarter of the people who vote in elections have children in school.
- ☑ Generally, states with the lowest high school dropout rates also have the lowest number of people in prison. Over 80% of prisoners are high school dropouts.

The Socioeconomic Conditions of Youth, continued

Youth in Crisis — Is America Making the Grade?
Barbara Walters Special News Report

☑ 13% of U.S. high school graduates read below the sixth grade level.

☑ One out of every four children drops out of school.

☑ The leading causes of death to children are drug- and alcohol-related violence and traffic crashes.

☑ 40% of young women become pregnant before they are 20.

Associated Press, 3/19/90

☑ Among six industrialized countries, the U.S. and Australia have the highest poverty rates among families with children. At least 99% of poor families with children in the other developed countries receive government assistance.

☑ The U.S. has the highest rate of teenage pregnancy.

☑ The murder rate of male youths in the U.S. is four to five times higher than the rates in other developed countries.

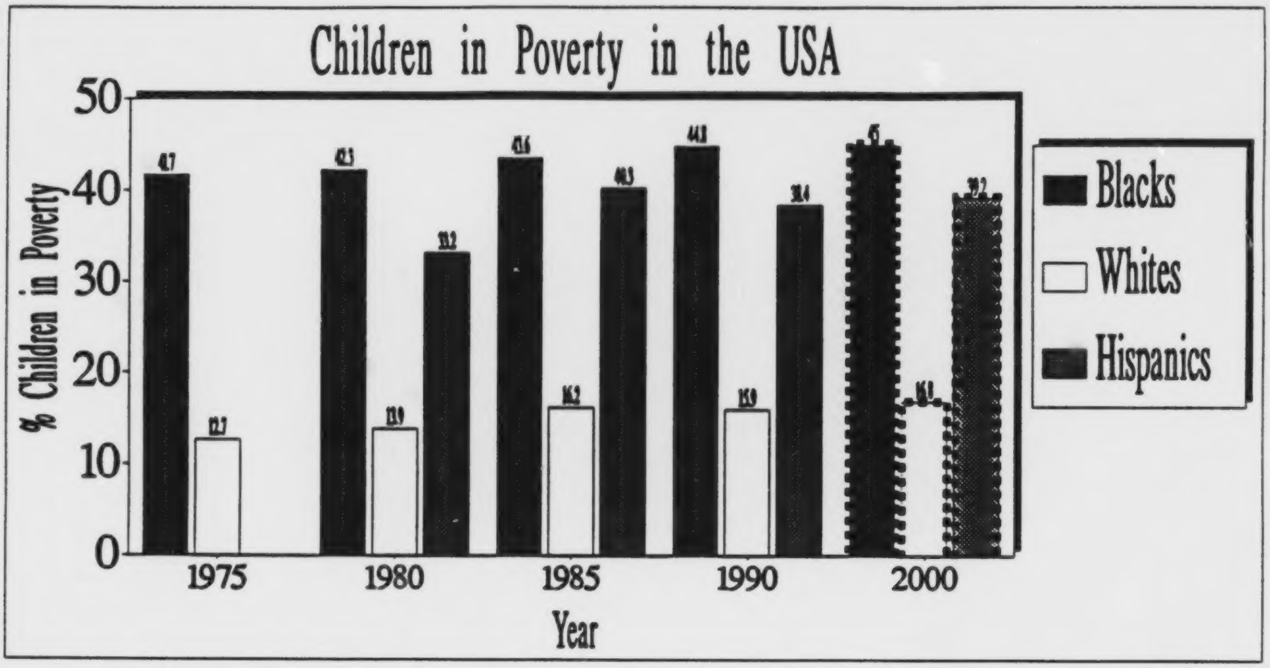
The Socioeconomic Conditions of Youth, continued

The State of American Youth, 1990

☑ Following are the top ten concerns of 3,000 17-19 year olds (from a 1989 University of Michigan study):

- having a good marriage and family life
- choosing a career and finding steady work
- doing well in school
- being successful in one's line of work
- having strong friendships
- paying for college
- preserving the country's status
- making a lot of money
- finding purpose and meaning in life
- avoiding AIDS

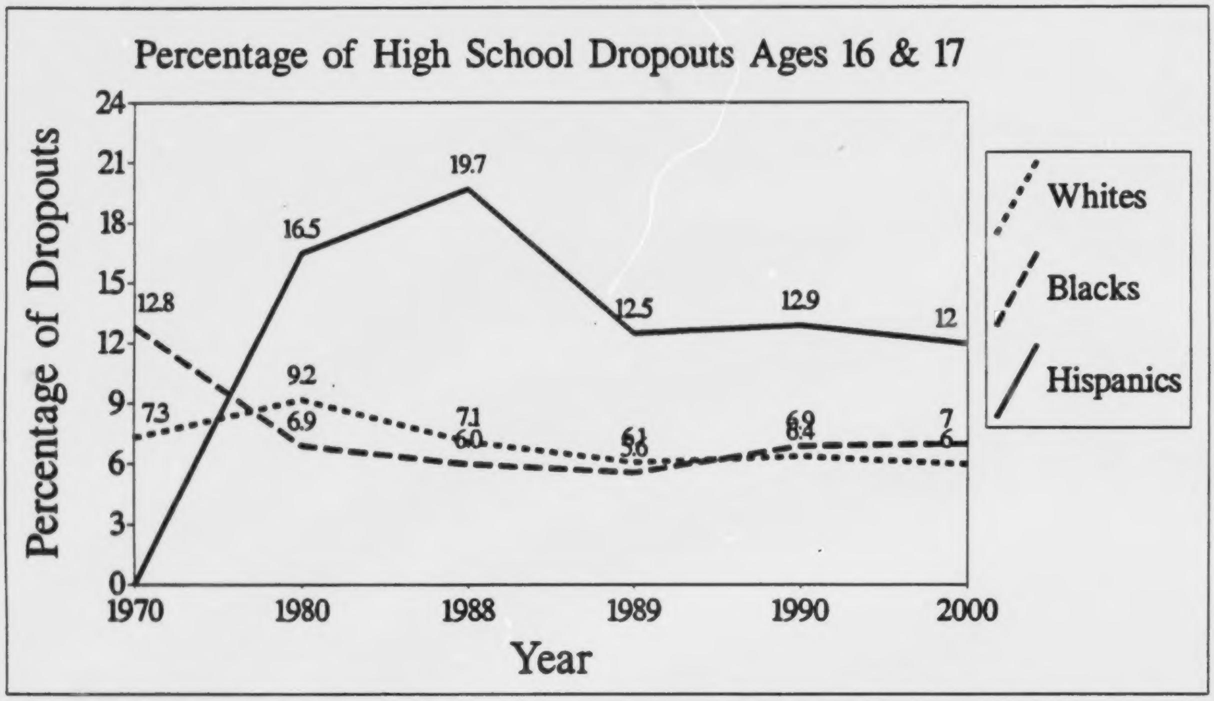
The Socioeconomic Conditions of Youth, continued


Children in Poverty in the USA

*1975 statistics for Hispanics were not available.
■■■■■■■ = Projections for the year 2000

Source: Poverty in the United States, 1990

The Socioeconomic Conditions of Youth, continued



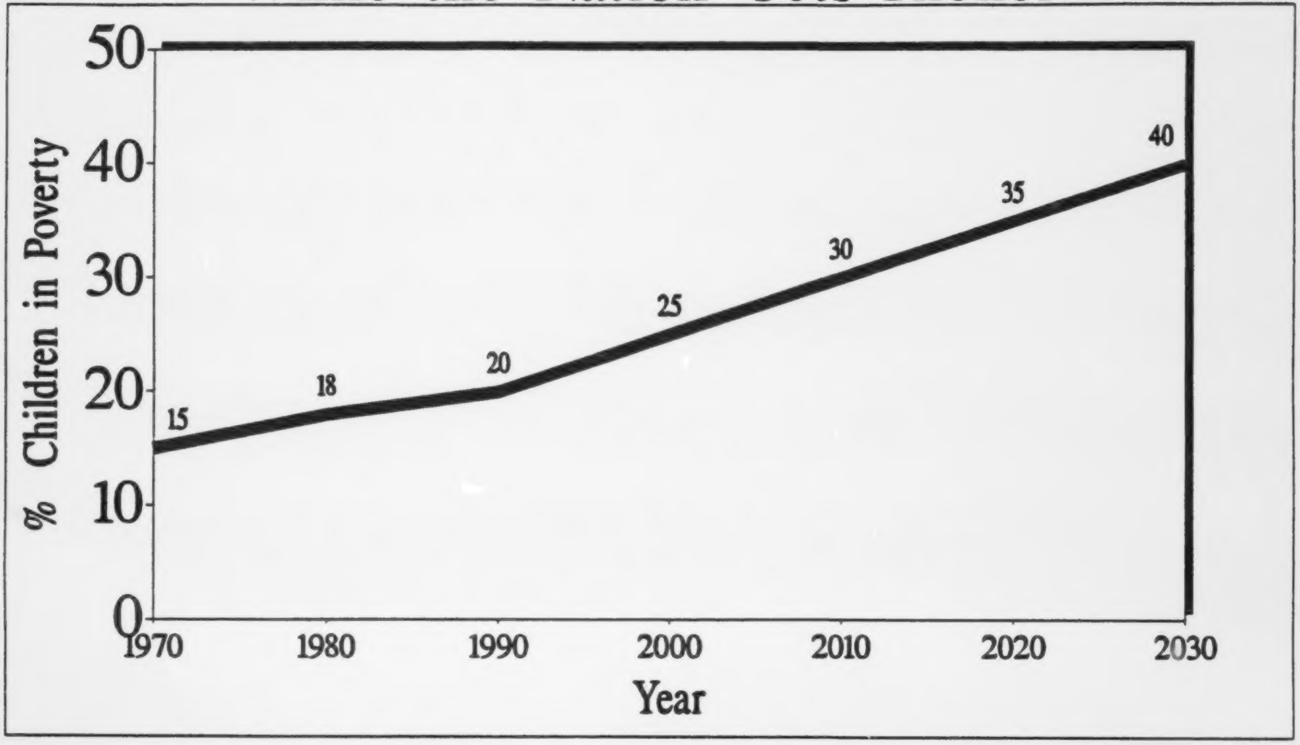
Percentage of High School Dropouts Ages 16 & 17

*1970 statistics for Hispanics were not available.

Source: US Bureau of the Census, June 1991

The Socioeconomic Conditions of Youth, continued

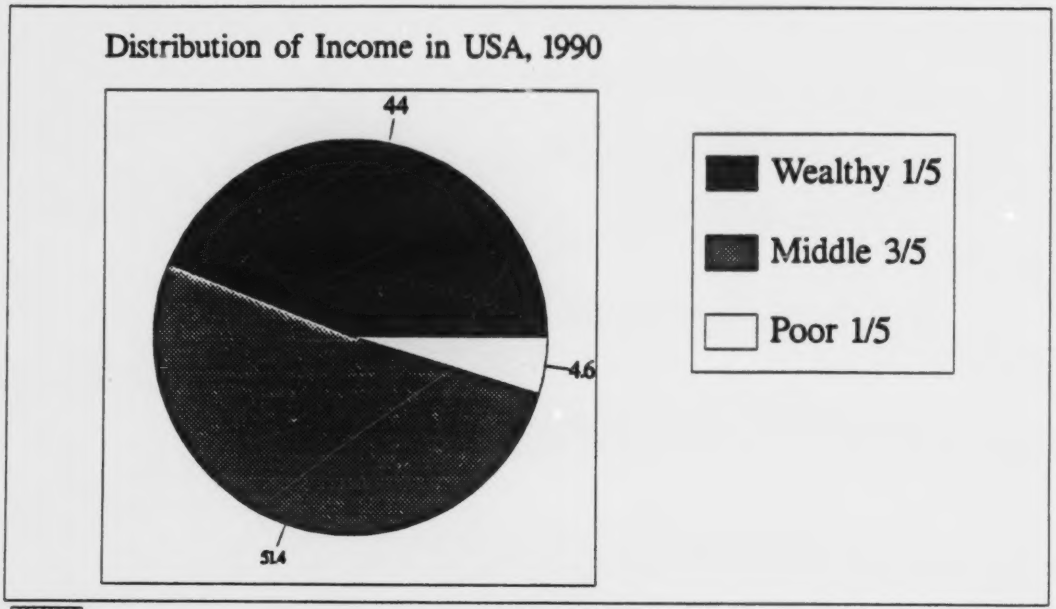
America's Children Are Getting Poorer While the Nation Gets Richer



- ✓ In the year 2000, if recent trends continue, there will be 16 million poor children in the United States, 3 million more than in 1987. One in every four children will be poor.
- ✓ By the year 2030, there will be 25 million poor children. One in every three children will be poor.

Source: CDF computations based on Census Bureau data.

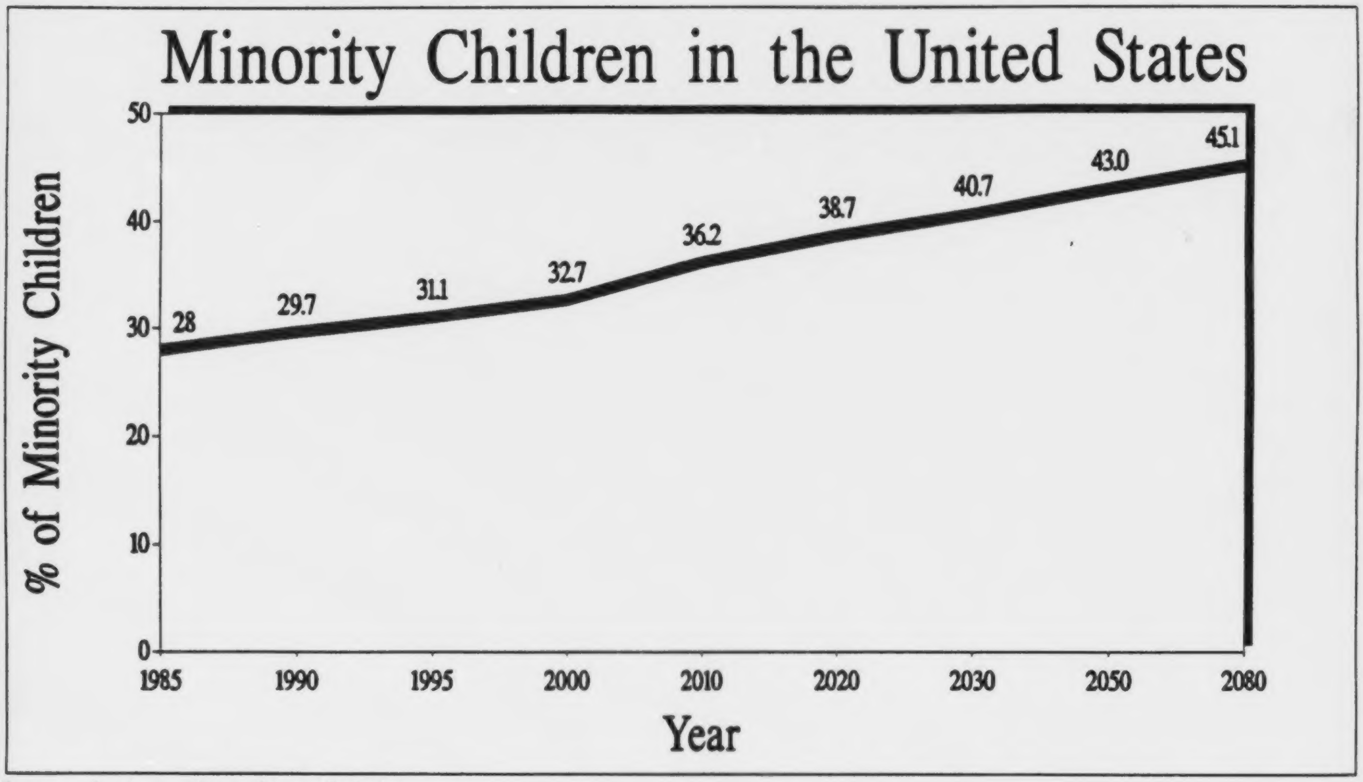
The Socioeconomic Conditions of Youth, continued


Distribution of Income in USA, 1990

✓ Note: Top 1% of families had more income than the bottom 40% combined.

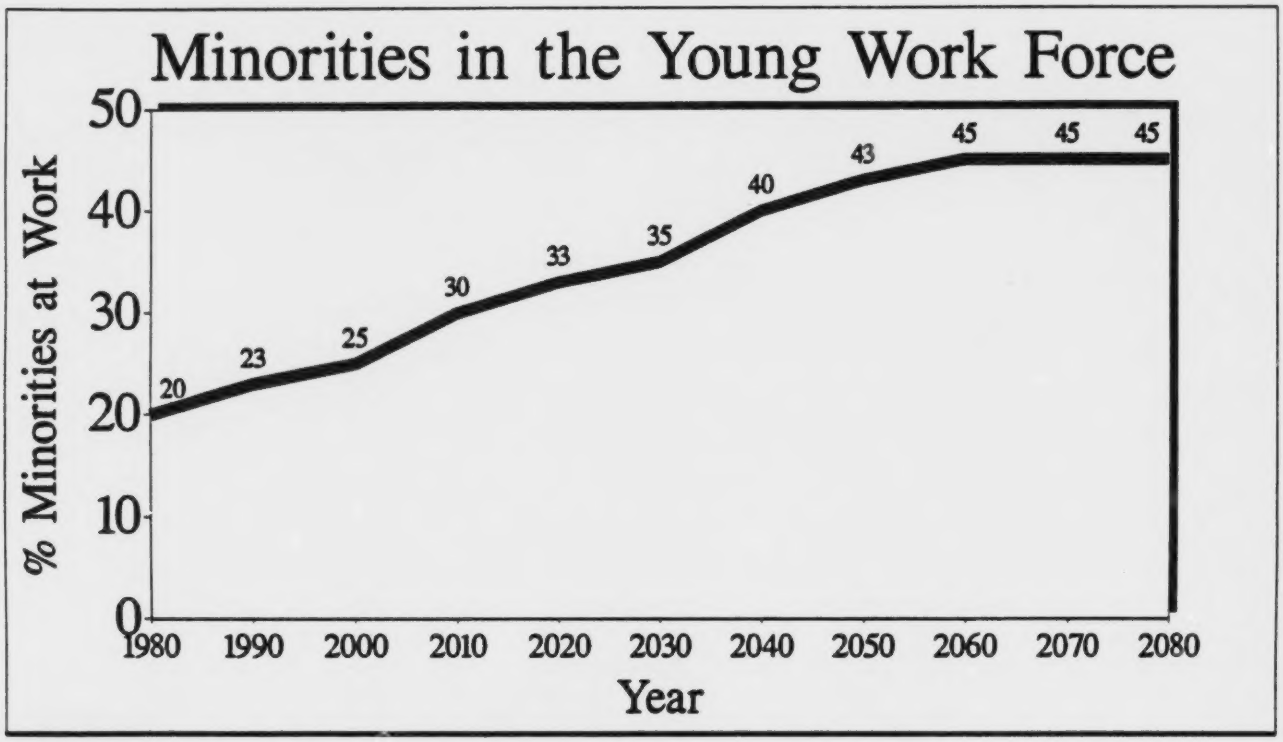
Source: American Behavioral Scientist, January/February 1992

The Socioeconomic Conditions of Youth, continued



Source: Based on Census Bureau Projections

The Socioeconomic Conditions of Youth, continued



- Nearly one third of the nation's 18-24 year-olds will be minorities in 2000, compared with less than one-quarter in 1985.
- There will be 26 percent fewer white, non-Hispanic 18 to 24 year-olds in the year 2030 than there were in 1985.

Source: Based on Census Bureau projections.

Taba Inductive Thinking Strategy

What is the Taba Inductive Thinking Strategy?

The Taba Inductive Thinking Strategy is a method to help students think logically when organizing large amounts of information. It helps develop sequential thinking.

Why Use the Taba Inductive Thinking Strategy?

This strategy can be beneficial when students need to process data in ways that involve many or complicated steps. It also encourages students to extend their thinking, regarding data creatively. This higher level thinking can help students grow in cognitive, intuitive, and affective areas of development.

When Should You Use the Taba Inductive Thinking Strategy?

This strategy is especially useful when students must process large amounts of data. It is also useful in teaching the sequential steps of the thinking process and how to use specific thinking methods systematically to solve everyday problems. Teachers may use this strategy when they are requiring students to expand their thinking capability, moving from a simple to a complex level. Successful use of the Taba Inductive Thinking Strategy results in students being better able to evaluate themselves and direct their own thinking.

How to Use the Taba Inductive Thinking Strategy

The thinking tasks of the model include four steps: concept formation, interpretation of data, application of generalizations, and resolution of conflict.

1. concept formation — identifying and enumerating data relevant to a problem, grouping these data according to some basis of similarity, and developing categories and labels for the groups
2. interpretation of data — interpreting, making inferences from, and developing generalizations about the data
3. application of generalizations — predicting consequences from hypothetical conditions involving the data, and explaining unfamiliar data
4. resolution of conflict — stating the issues involving the data, using some of the data to support an argument, and interpreting

Taba Inductive Thinking Strategy, continued

Teachers lead students through these four steps (each of which requires a different level of thinking) using open ended questions. These include focusing questions, questions calling for variety, questions calling for clarification or extension, and questions calling for reasons or support for ideas.

Debriefing the Taba Inductive Thinking Strategy

Debriefing is important. It gives students a chance to articulate the logical, sequential steps of thinking. Teacher educators should encourage their students to reflect on the efficacy of "questioning techniques" in promoting different levels of thinking. They should also reflect on the impact of using such techniques in the classroom.

Things to Remember

1. Match the eliciting questions to the specific cognitive tasks within each strategy.
2. Place cognitive tasks in optimal order.
3. Carefully monitor how students are processing the information.

References

Brantley, H., & Washington, S. M. (1990). Using higher level questioning as a method to improve evaluation of language skills. (ERIC Document Reproduction Service ED 315 772)

Joyce, B., & Weil, M. (1986). Models of teaching. Englewood Cliffs, NJ: Prentice-Hall, Inc.

LEARNING STYLES

Perennial Problem

What should be done about integrating the new basic skills into vocational education?

Practical Problem

What should be done to help teachers respond to the learning style differences of their students?

Justification for Lesson

Students have different learning styles. Some learn better in a vocational or laboratory setting; others prefer a more traditional academic environment. When teachers acknowledge these differences in learning styles, students learn better. Integrating new basic skills instruction into curriculum in a manner sensitive to learning style differences will increase students' acquisition of the new basic skills.

Learner Outcome

The learner will know how to design lessons which acknowledge the learning style differences of students.

Instructor Resources

Handouts:
  Gregorc Learning Style Delineator
  Gregorc Learning Style Summary Sheets I, II, III
  Cooperative Learning Strategy
Transparency:
  Calvin Woodward Poem

Teaching Strategy Modeled

Cooperative Learning Strategy

LESSON PLAN

Objectives:

Content:
The learner will describe the general characteristics of his or her own learning style.

The learner will become conscious of how important it is for teachers to respond to every student's learning style. The learner will have a better understanding of the need to acknowledge students' learning styles when designing teaching-learning activities.

New Basic Skills:
The learner will identify the new basic skills practiced in this lesson.

Process:
The learner will design a lesson by using the Cooperative Learning Strategy.

Application:
The learner will design lessons which acknowledge the learning style differences of students.

Teaching-Learning Interaction

Day Prior to Lesson:
Distribute the handouts titled Gregorc Learning Style Delineator and Gregorc Learning Style Summary Sheet I, II, and III. Ask the students to complete the Delineator to discover their own learning style strengths.

Day of Lesson:
Put the following chart on the board prior to the start of class:

Concrete Sequential	Abstract Sequential	Concrete Random	Abstract Random

Introduction:
Have the students sign their names under the column that matches their learning style. Discuss the results. Are there any surprises?

Learning Activities:
Step 1:
Without having students look at the Gregorc Learning Style Summary Sheets, ask them to give key words which describe the four learning styles (concrete sequential, abstract sequential, concrete random, and abstract random). Students with strengths in a particular style can lead in formulating the descriptions.

Teaching-Learning Interaction, continued

Step 2:
Divide the class into groups of four to five. Make sure that each group includes students representing at least three of the four different learning styles (or two, if there is not a sufficient distribution of all four learning styles in the class). Write the following group task on the board, giving the students 20 minutes to work on it:

1. As a group, select a subject to be taught. Write an objective for a lesson addressing that subject.
2. You will now write four learning activities to include in your lesson. Consider the four Gregorc Learning Styles: concrete sequential, abstract sequential, concrete random, and abstract random. Determine how to teach your group's lesson to students with each of the four learning styles. Describe specific teaching-learning activities, and explain how each activity meets the learning style preferences of students.

Step 3:
End the group work and bring the class together.
Ask each group to report their lesson objectives and learning activities.

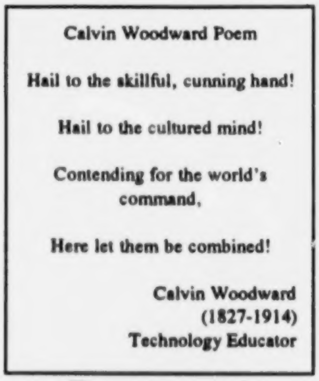
Debriefing Strategies

Content:
Ask the following questions:

1. Thinking back on your own school experiences, which of your learning style needs were most frequently met?
2. Which learning style needs are likely to be met in the various vocational disciplines (agriculture, business, home economics, marketing)?
3. As a teacher, you are most likely to meet the needs of students whose learning styles are similar to your own. Describe what you would do to meet the needs of students whose learning styles differ from yours.
4. To be successful, students need skills from all four of the Gregorc Learning Style quadrants. How can you help a student develop skills in the quadrants that do not reflect his or her learning style?

Debriefing Strategies, continued

5. If a teacher designs learning activities directed to a student's learning style at least part of the time, the student will usually stay involved. Describe the probable behaviors of a student whose learning style needs are **never** met in class.



Calvin Woodward Poem

Hail to the skillful, cunning hand!

Hail to the cultured mind!

Contending for the world's command,

Here let them be combined!

Calvin Woodward
(1827-1914)
Technology Educator

Transparency 1

To help summarize the content of the lesson and the importance of vocational and academic education, display the transparency titled Calvin Woodward Poem.

New Basic Skills:
During the lesson today, what new basic skills did you practice?

- Learning to learn
- Reading
- Communication
- Adaptability
- Personal management
- Group effectiveness
- Influence

Process:
Distribute the handout titled Cooperative Learning Strategy and ask the following questions:

1. Cooperative learning involves four basic elements: interdependence, face-to-face interaction, group and individual accountability, and the use of interpersonal and small group skills. To what extent did today's activity use these elements?
2. What are the benefits of the Cooperative Learning Strategy?
    - Student achievement increases.
    - Students improve in social skills and verbal abilities.
    - Student self-esteem increases.
    - Students receive ongoing assistance in solving a problem.
    - Students are more positive about the subject and the teacher.
    - Students are more motivated.

Debriefing Strategies, continued

3. What are the drawbacks of the Cooperative Learning Strategy?

    - Cooperative learning takes more time.
    - Cooperative learning increases classroom noise.
    - The teacher must plan for group and individual accountability.
    - Unmotivated, disliked, and lazy students can be challenges.
    - The teacher sacrifices some control over learning.
    - The teacher must monitor each group.

Evaluation Options

Content:
Have students write a lesson plan which includes activities that meet the needs of students representing all four Gregorc Learning Styles.

Process:
Have students design a lesson using cooperative learning as the teaching strategy. Effective cooperative learning activities take extensive advanced planning. Be sure that students' lessons reflect all elements of planning.

Application:
Have students observe a class and identify the learning style needs being met by class activities. Have students assess student behavior as it may relate to learning style needs.

Individualized Learning Plan

If a student is learning this content in an individualized program, the student should be given the entire lesson. The student should read all materials. The college supervisor will designate which Evaluation Options will be required of the student. To demonstrate competency, the student should prepare to teach the lesson to a group designated by the college supervisor. Suggestions for such groups include: teacher groups, service organizations, youth groups, etc.

Gregorc Learning Style Delineator

Anthony F. Gregorc, Ph.D.

1. **REFERENCE POINT.** You must assess the relative value of the words in each group using your SELF as a reference point; that is, who you are deep down, NOT who you are at home, at work, at school, or who you would like to be or feel you ought to be. THE REAL YOU MUST BE THE REFERENCE POINT.

2. **WORDS.** The words used in the Gregorc Style Delineator matrix are not parallel in construction, nor are they all adjectives or all nouns. This was done on purpose. Just react to the words as they are presented.

3. **RANK.** Rank in order the ten sets of four words. Put a **4** in the space above the word in each set which is the best and most powerful descriptor of your SELF. Give a **3** to the word which is the next most like you, a **2** to the next, and a **1** to the word which is least descriptive of your self. Each word in a set must have a ranking of **4, 3, 2, or 1**. No two words in a set can have the same rank.

4. **REACT.** To rank the words in a set, react to your **first impressions.** There are no right or wrong answers. The real, deep-down you is best revealed through a first impression. Go with it. Analyzing each group will obscure the qualities of SELF sought by the Delineator.

5. **PROCEED.** Continue to rank all ten **vertical** columns or words, one set at a time.

6. **TIME.** Recommended time for word ranking is **four minutes.**

7. **SCORING.** To score, first add the numbers **across,** then add the numbers **down.**

Gregorc Learning Style Delineator, continued

1	2	3	4	5	Total			
____ objective	____ perfectionist	____ solid	____ practical	____ careful w/detail				
____ evaluative	____ research	____ quality	____ rational	____ ideas				
____ sensitive	____ colorful	____ nonjudgmental	____ lively	____ aware				
____ intuitive	____ risk-taker	____ insightful	____ perceptive	____ creative				
6	7	8	9	10				
____ thorough	____ realistic	____ ordered	____ persistent	____ product-oriented				
____ logical	____ referential	____ proof	____ analytical	____ judge				
____ spontaneous	____ empathy	____ attuned	____ aesthetic	____ person-oriented				
____ troubleshooter	____ innovative	____ multi-solutions	____ experimenting	____ practical dreamer				
					CS	AS	AR	CR

Gregorc Learning Style Summary Sheet I

CONCRETE SEQUENTIAL ____%

Concrete
Sequential
Organized
Thorough
Detailed
Steady
Practical
Objective
Competent
To-the-point
Factual
Reliable
Perfectionist
Physical
Hands-on
Step-by-step
Structured
Precise
Reliable
Cautious
Realistic
Industrious
On time
Predictable
Task-oriented
Steadfast
Active
Trustworthy

Hands-on
Computers
Short Lecture
Outlines
Involvement
Demonstration
Field trips
Flowcharts
Labs
Charts

ABSTRACT SEQUENTIAL ____%

Abstract
Sequential
Ordered
Thinker
Thorough
Critical
Standards
Reasoning
Studious
Challenge
Precise
Student
Writers
Scholarly
Conceptual
Logical
Intellectual
Inquisitive
Argumentative
Analytical
Rational
Unemotional
Evaluate
Enthusiastic
Clumsy
Excellence
Detached
Structured

Reading
Writing essays
No time pressure
Library work
Thinking tasks
Lecture
No competition
Work alone
Research
Experts

CONCRETE RANDOM ____%

Concrete
Random
Flexible
Leaders
Unusual
Investigative
Intuitive
Variety
Inquisitive
Trial & error
Daring
Rebellious
Original
Procrastinate
Real world
Nonlinear
Independent
Creative
Experimental
Curious
Leaps of thought
Changing
Insight
Risk-takers
Different
Divergent
Inventive
Process

Problem-solve
Options
Inventing
Discovery
Brain-teaser
Experiments
Simulations
Projects
Role Playing
Design

ABSTRACT RANDOM ____%

Abstract
Random
Flexible
Open
Pleasers
Personalize
Imaginative
Expressive
Sympathetic
Supportive
Friendly
Understanding
Emotional
Cooperative
Emotional
Nonlinear
Adaptable
Sensitive
Interpretive
Aesthetic
Colorful
Relationships
Warm
Subjective
Sociable
Empathetic
Reflective
Metaphorical

Discussion
Role play
Arts
Television
Themes
Coop. learning
Short lecture
Humor
Fantasy
Personalized

Gregorc Learning Style Summary Sheet II

How To Recognize

Concrete Sequential Students

- Take notes in outline form — thorough
- Like labs, hands-on demonstrations
- Are well organized
- Are exact in their work
- Want specific answers
- See things through to the end
- Follow directions
- Are not risk-takers
- Want learning to be useful
- Like objective tests
- Like immediate results
- Put effort into work
- Pay attention to deadlines
- Ask lots of questions about specifics of assignments
- Read directions
- Like to sit in same place in class
- Don't like changes in assignments/routines
- Like exact, structured work
- Like memorization
- Proceed step-by-step
- Give to-the-point answers
- Take things at face value
- Don't like group work — would rather work alone
- Need to be prepared for changes

Abstract Sequential Students

- Like to talk about ideas
- Like to debate
- Love to read and write — read quickly and easily
- Have a large vocabulary
- Are predictable
- Write long papers
- Are thorough in assignments
- Like quiet to work
- Are responsible to law
- Appear smart in book knowledge
- Like to think through ideas rather than work on a project
- Like learning for learning's sake
- Want teachers to be experts — may challenge
- Need time to gather information and reach conclusions
- Are intellectual diplomats or argumentative debaters
- Want to know how and why
- Read too much into questions
- Have high standards
- Accept only A's for themselves
- Like to work alone
- Focus on content and theories
- Like library work
- Think rationally and logically
- Learn well through lecture
- Follow directions if directions aren't picky
- Like standardized tests
- Feel clumsy with projects

Colorado State University, 1992.

Gregorc Learning Style Summary Sheet III

How To Recognize

Concrete Random Students

Like to discover the answers to problems
Are non-linear thinkers
Are flexible
Compete with themselves, not others
Are independent
Are willing to be different — creative
Give out-of-the-ordinary answers
Like to be leaders
Like to experiment — "What If"
Work within general guidelines
Like to explore possible answers
Know answers without knowing how they got them — no step-by-step process
Have leaps of thought
Like change, variety, options, choices
Lose track of time when involved
Consider process more important than end results
Like problem solving
Like simulations
Take a trial and error approach to learning
Like the unusual
Don't like to be controlled (fenced in)
Don't like structured assignments
Are procrastinators
Don't need many details
Not concerned if tasks unfinished

Abstract Random Students

Filter through emotions
Don't read directions
Need time for reflection
May have difficulty categorizing
Like flexible time schedules
Tune into "vibrations"
Adjust to changes easily
Are sensitive — like to be open with teachers
Work to please others
Worry about what others think
Personalize learning
Like the arts
Are colorful
Are daydreamers
Experience imagined fears
Express feelings openly
Are spontaneous
Consider relationships important
Are sympathetic, warm hearted
Are good listeners
Like group work
Like thematic learning
Like people oriented subjects
Give away feelings in facial expressions
Are easily hurt
Maintain friendly relationship with teacher
Have overactive imaginations
Like metaphors
Don't like overly structured assignments
Don't like objective tests

Cooperative Learning Strategy

What is the Cooperative Learning Strategy?

Group work can be a valuable learning technique. However, group work may prove less effective than hoped if students are unable to interact well. Cooperative learning is a structured technique which uses peer tutoring, group investigation, and cooperation to encourage student learning. In addition, it teaches the importance of group work through the use of content, dividing the learning process into pieces and giving individuals and small groups ownership of the content being taught.

Why Use the Cooperative Learning Strategy?

The purposes of this strategy are (1) to increase achievement through group collaboration, enabling students to learn from each other, (2) to use cooperation and peer instruction to benefit both high and low ability students, and (3) to improve human relations between races and ethnic groups in the classroom by promoting interdependent activities that teach collaborative skills.

When Should You Use the Cooperative Learning Strategy?

Teachers can use the Cooperative Learning Strategy effectively when they want to decrease emphasis on competitive or individualistic learning methods. Teachers can use this strategy to teach cooperative skills and academic skills simultaneously. It is also helpful when a teacher feels that a class is not working as a team, when individuals with good ideas are being shut out, or when one or two students are monopolizing discussion.

How to Use the Cooperative Learning Strategy

Cooperative small group learning involves four basic elements:

1. interdependence among students seeking mutual goals through combined efforts (the interdependence must be structured, usually through the use of shared resources)
2. face-to-face interaction among students
3. group and individual accountability for mastery of the material covered
4. appropriate use of interpersonal and small group skills by students

Cooperative Learning Strategy, continued

The teacher's role in structuring cooperative learning situations involves these elements: (a) clearly specifying lesson objectives, (b) placing students in productive learning groups, (c) providing appropriate materials, (d) clearly explaining the cooperative goal structure, (e) monitoring students, (f) giving specific assignments to each student within a group, and (g) evaluating performance.

Debriefing the Cooperative Learning Strategy

Debriefing gives students the chance to articulate the specific skills they have developed or honed through the practice of this strategy. These skills would include:

1. Interpersonal effectiveness
2. Communication
3. Integration of process with content
4. Teamwork
5. Appreciation of others' contributions (multiple intelligences)

Things to Remember

1. Each group only receives one set of materials.
2. Each individual within the group has a role and responsibility.
3. Each individual within the group is accountable to report and support the group decisions.
4. Each group must debrief their group interaction skills.

References

Gardner, H. (1983). Frames of mind: The theory of multiple intelligences. New York: Basic Books, Inc.

Kindsvatter, R., Wilen, W., & Ishler, M. (1992). Dynamics of effective teaching. White Plains, NY: Longman Publishing Group.

SPECIAL POPULATIONS

Perennial Problem

What should be done about integrating the new basic skills into vocational education?

Practical Problem

What should be done to help teachers facilitate the success of *all* students in their classrooms?

Justification for Lesson

Students come to the classroom with varying skill levels and abilities. The recent mainstreaming of special needs students has increased the range and diversity of student abilities in the average classroom. The challenge for the teacher is to establish a learning environment which promotes each student's learning strengths and provides compensatory options to each student for overcoming learning difficulties. Meeting this challenge will help provide *all* students with the opportunity to acquire the new basic skills.

Learner Outcome

The learner will recognize that all students have learning strengths and weaknesses.

Instructor Resources

Handouts:
  Realistic Alternatives for a Mainstream Teacher (9 pages)
  Constructivist Teaching Strategy
Supplies:
  Flipchart paper, markers, and masking tape

Teaching Strategy Modeled

Constructivist Teaching Strategy

LESSON PLAN

Objectives:

Content:
The learner will analyze his or her own learning strengths and difficulties.

The learner will identify strategies that address his or her own learning difficulties.

New Basic Skills:
The learner will identify the new basic skills practiced in this lesson.

Process:
The learner will experience and evaluate the Constructivist Teaching Strategy.

Application:
The learner will be able to relate this lesson's content to the experience of teaching a classroom of diverse students.

Teaching-Learning Interaction

Day Prior to Lesson:
Distribute the 9-page handout titled Realistic Alternatives for a Mainstream Teacher. Instruct students to read the handout before tomorrow's class.

Day of Lesson:
Introduction:
Pose the question, *How can teachers facilitate the success of all students in their classrooms?* Give students a maximum of five minutes to respond. Expect students to respond based on their current understandings. Write their ideas on the board.

Learning Activities:
Step 1:
Ask students to think about themselves as learners. On a piece of paper, have students list five of their personal learning strengths and difficulties. Instruct the students to review their lists and briefly describe how they have addressed each learning difficulty while in school.

Step 2:
Divide the class into groups of four to six. Give each group markers, tape, and three sheets of flipchart paper. Ask each group to label one sheet of flipchart paper "Strengths," another sheet "Difficulties," and another "Compensations."

Have students individually report their learning strengths, difficulties, and compensations while one volunteer from each group records. Post the completed charts in the front of the classroom.

Step 3:
Have students continue to work in their small groups to develop an outline of a lesson plan in some content area. Have students design lessons that will employ methodologies and strategies discussed in the previously assigned handout Realistic Alternatives for a Mainstream Teacher.

Debriefing Strategies

Content:
Ask the following questions:

1. What insights have you gained from this lesson?
2. How might your personal learning strengths and difficulties influence your teaching?

New Basic Skills:
During the lesson today, what new basic skills did you practice?

- Communication
- Learning to learn
- Group effectiveness
- Personal management
- Adaptability
- Influence
- Reading and writing

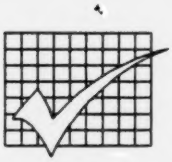
Process:
Distribute the handout titled Constructivist Teaching Strategy and ask the following questions:

1. What are the strengths and weaknesses of the Constructivist Teaching Strategy?
2. Can you describe the role a teacher plays in a lesson employing this strategy?

Evaluation Options

Content:
Have students develop a lesson for students with special needs. Be sure to identify for the students the special needs for which the lesson is being adapted.

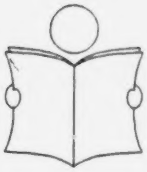
Process:
Have students develop a lesson in their subject area which employs a constructivist approach.



Evaluation Options, continued

Application:

1. Have students interview a learner with special needs, asking about his or her educational experiences.
2. Have a panel of special needs students describe for your class their learning experiences; have your class question the panel about how effectively the educational system has addressed their special needs.



Individualized Learning Plan

If a student is learning this content in an individualized program, the student should be given the entire lesson. The student should read all materials. The college supervisor will designate which Evaluation Options will be required of the student. To demonstrate competency, the student should prepare to teach the lesson to a group designated by the college supervisor. Suggestions for such groups include: teacher groups, service organizations, youth groups, etc.

Realistic Alternatives for a Mainstream Teacher[1]

Adaptations that Facilitate Mainstreaming

Classroom Organization
vary grouping arrangement
vary methods of instruction

Classroom Management
vary grading system
vary reinforcement systems
vary rules

Methods of Presentation
vary content
vary general structure
vary type
modify curriculum

Methods of Practice
vary general structure
vary level of response
vary type of materials

Methods of Testing
vary type
vary general structure
vary level of response

Special Assistance
resources within the school
resources outside the school

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[1] Reprinted with permission from Kay Cessna, Colorado Department of Education.

Realistic Alternatives for a Mainstream Teacher, continued

Classroom Organization	Classroom Management	Methods of Presentation	Methods of Practice	Methods of Testing
Vary Grouping	*Vary Grading System*	*Vary Content*	*Vary General Structure*	*Vary Type*
Arrangement	Homework	Amount to be learned	Amount to be practiced	Verbal
Large group instruction	Tests	Time to learn new	Time for practice	Written
Small group instruction	Class discussion	information	Group/individual	Demonstration
Individual instruction	Special projects	Conceptual level	Teacher directed/	
Peer tutoring			independent	*Vary General Structure*
Independent self-	*Vary Reinforcement*	*Vary General Structure*	Items ranging from	Group/individual
instructional activities	*Systems*	Advanced organizers	easy to difficult	Amount to be tested
Learning center	Praise	Previewing question		Time for completion
	Notes sent home		*Vary Level of Response*	
Vary Methods of	Grades	*Vary Type*	Copying	*Vary Level of Response*
Instruction	Free time	Verbal-lecture	Recognition	Recognition
Teacher directed	Special activity	Written-texts	Recall with cues	Recall with cues
Student directed	Tangibles	Worksheets		Recall
	Progress charts	Demonstration	*Vary Type of Materials*	
		Audiovisuals	Worksheets	
	Vary Rules	Tape recorders	Tests	
	Differentiated for some	Filmstrips	Audiovisuals	
	students	Movies		
	Explicit/implicit	Opaque projectors		
	discussion	Transparencies		

Colorado State University, 1992.

Realistic Alternatives for a Mainstream Teacher, continued

Possible Intervention Strategies

The following are examples of possible intervention strategies or educational alternatives supporting mainstreaming. Intervention strategies must be individualized to address specific problems. Please note that these suggestions are not intended to be exhaustive, but are presented as guidelines.

A. Modified Curriculum

1. Change academic level
    a. provide an easier instructional level
    b. provide a more difficult instructional level
2. Change teacher expectation
    a. reduce teacher expectation for student performance (e.g., reduce assignment load)
    b. increase teacher expectation for student performance
3. Change teacher methodology
    a. present more visual cues
    b. present more auditory cues
    c. provide more combined cues in presenting information
    d. provide more remedial lessons for deficient academic skills
    e. give verbal instructions for each assignment
    f. arrange for a "buddy system" so that student can ask additional questions, check assignment, etc.
    g. change instructional strategies (e.g., (1) student is having difficulty with copying from board, so teacher provides a worksheet at the desk from which student is allowed to copy, (2) student has difficulty making sound/symbol association, so teacher switches from a phonetic to a visual approach to teach reading)
    h. change curriculum materials
    i. tape lessons student cannot read
    j. use multisensory materials

B. Modified Structure

1. Change student's schedule
2. Change student's class
3. Change student's teacher
4. Move student's seat for specific purpose
    a. provide closer reach contact
    b. move student closer to chalkboard

Realistic Alternatives for a Mainstream Teacher, continued

    - c. move student closer to teacher when instructions are given
    - d. move student from disruptive influences: distracting window, noise, or students
- 5. Provide study carrel
- 6. Provide isolated area of work within the classroom
- 7. Reduce school day
- 8. Provide relaxation time
- 9. Modify lighting
- 10. Provide small groups or one to one contact
- 11. Keep student in after school and/or at recess
- 12. Use in or out of school suspension

C. Special Assistance

- 1. Use resources within school
    - a. implement Chapter 1 program
    - b. implement small group sessions with reading specialist
    - c. arrange placement in another program
    - d. arrange individual or group counseling with psychologist, counselor, or social worker
    - e. provide peer tutoring or counseling
    - f. provide volunteer tutoring
    - g. recommend summer school
    - h. recommend alternative/transition classes in school
    - i. recommend homebound instruction
    - j. arrange family assistance by school social worker
    - k. arrange grade level reassignment
    - l. support home/school communication
    - m. arrange parent conferences
    - n. use classroom aides
- 2. Use resources outside school
    - a. suggest individual or group counseling for student
    - b. suggest family counseling/therapy
    - c. suggest private tutoring
    - d. suggest involvement from outside agency
    - e. suggest relaxation time
    - f. suggest evaluation for medication
    - g. suggest medical checkup
    - h. suggest neurology clinic
    - i. suggest other agency help (Horizons, Social Services, etc.)

Realistic Alternatives for a Mainstream Teacher, continued

D. Classroom Management Procedures

1. Institute positive reinforcement for academic or social behavior
    a. keep a star or other recognition chart
    b. bestow free time or extra privilege
    c. use grades
    d. bestow praise
    e. use food
    f. implement a token economy
2. Institute negative reinforcement for academic or social behavior
    a. use time out
    b. ignore behavior
    c. withhold reward or privilege
3. Provide sessions for entire class on appropriate behavior; sessions led by counselor, psychologist, and/or social worker
4. Use timer
5. Post class rules
6. Limit or expand choices for student
7. Provide a stress outlet

Modifications in Written Language

For students who have difficulty with the mechanical production of writing:

- allow computer use for written work
- allow sufficient time to complete written work
- give a choice of printing or cursive writing
- give faded prompts for learning cursive or printing
- talk through letter formulas
- use non-skid matter under paper, or use clipboard or tape to keep paper in place
- emphasize good posture
- allow different writing materials (crayons, grippers, different sizes of pencils, etc.); also different types of paper (wide ruled, etc.)
- allow use of #2 pencils rather than hard leads
- avoid colored paper
- keep regular pencils on hand

Realistic Alternatives for a Mainstream Teacher, continued

For students who have difficulty taking notes:

- allow use of a tape recorder
- dictate important information and have the student copy it
- have one student use carbon paper; give copy to the student with the writing difficulty
- provide an outline or copy of lecture notes
- encourage drawing pictures for note taking if this is helpful
- use standardized notebook sheets with spaces designated for topic, notes, and assignments
- copy written material and highlight important information for the student

For students who have difficulty organizing their written work:

- provide an example or model of the required response
- provide a darker copy underneath the student's paper to show where to indent
- have consistent requirements for written work in all classes — reference both TDC (topic, detail, conclusion) and sandwich ideas; also have consistent requirements for headings, etc.
- put numbers down the side of the page for math problems

To encourage expression of ideas in written form:

- don't penalize for spelling
- give credit for ideas and concepts; accept approximations

For students who have difficulty taking written tests:

- allow answers to be expressed pictorially or verbally
- allow demonstrations rather than written work
- allow computer use for test taking
- allow sufficient time to complete tests

Modifications in Reading

Formats which are easier for students to read:

- use pictures, graphics, visuals, etc., to help explain written material
- get large print editions or use enlarger on photocopy machine
- double space written material whenever possible
- on a computer, use plain fonts; avoid use of dot matrix printers
- print directions rather than using cursive

Colorado State University, 1992.

Realistic Alternatives for a Mainstream Teacher, continued

- avoid hyphenated words
- be careful of copy quality; purple dittos are difficult
- avoid contractions

Ideas to help students get the most information from reading material:

- provide an outline
- highlight important information
- provide reading materials at a lower reading level
- institute buddy reading
- rewrite directions in simple, concise language
- list and review vocabulary words
- choose encyclopedias carefully — reading level and number of illustrations vary considerably from one to another
- use rebus symbols above difficult words
- keep reference materials handy (dictionary, etc.)

Adjustments in assignments for students who have difficulty reading:

- reduce the amount of reading required
- allow students to choose which comprehension questions to answer (work any 10, work any five odd, etc.)
- modify the objectives of the lesson; the handicapped student should be able to meet some of the objectives of the lesson, but not all
- use a whole language approach (may need extra conferencing; the student may not be as easily self directed)

Ideas to help students gain information by means other than reading:

- have someone read materials into a tape recorder so that the student can listen
- use three dimensional examples (globes, etc.)

Modifications in Mathematics

Ideas for students who have difficulty organizing their work:

- turn lined paper sideways to help with keeping numbers aligned
- photocopy pages from the book
- enlarge problems

Realistic Alternatives for a Mainstream Teacher, continued

Ideas for students who have difficulty with math facts:

- develop tricks for learning math facts; let students help make them up
- allow the use of calculators or multiplication tables
- develop rate of response so that math facts become automatic (precision teaching, reference chart)

Ideas for students who have difficulty understanding math concepts:

- make problems realistic and meaningful
- use manipulatives

Other ideas:

- develop left-handed papers, so that left-handed students' hands don't cover up questions or examples as they work
- let whoever finishes first put his or her name on the board; let this person pair up with the second finisher to correct papers; if they come up with different answers, let them work together to solve the problem
- post charts that list the steps in particular math processes
- use touch math
- use decks of cards that have dots and numbers

Methods for Presentation of Information

Ideas for students who learn best through different modalities and learning styles:

- use hands-on materials (charts, objects, graphs, etc.)
- use movement
- use role playing
- use film strips, movies, opaque projectors, videos
- use experiential learning
- use cooperative learning
- break assignments into steps

Ideas for using audiovisual equipment:

- use an outline, cover with paper, and move down
- use a marker with a single cutout so that only one sentence shows at a time

Realistic Alternatives for a Mainstream Teacher, continued

- use different colored markers on an overhead or flipchart for emphasis
- leave some lights on for note taking
- cue what's important in the film, i.e., provide an outline before hand, stop the film and discuss at various points (videos may be easier for stopping and discussing), and turn down the volume during irrelevant material

Ideas for presenting information in lecture format:

- before the lesson, distribute an outline of the material to be covered
- tape lectures to make them accessible to students who were absent when they were given, students who wish to listen to them again, or the special education teacher
- cue important information by using different types of print, different colors
- underline key words in handouts; tell students what's important in the lecture
- associate information with cues, especially in science and math

Other ideas to work on:

- notebook organization
- study skills
- problem solving
- decision making
- time management — calendars, assignment sheets, homework logs
- consistent routines throughout school or at least grade level
- staff organization, mentoring, teaming
- individualization (easier to individualize with hands-on projects)
- importance of inservice and preparation of staff and students regarding integration/inclusive classrooms
- how to have handicapped students truly included in the classroom, rather than being a separate group within the larger class
- self advocacy — how to not rescue so much, and help students take responsibility for their own learning
- interdisciplinary units

Constructivist Teaching Strategy

What is the Constructivist Teaching Strategy?

The Constructivist Teaching Strategy is based on the idea that learning proceeds through stages that cause qualitative changes in the organization of knowledge.

Why Use the Constructivist Teaching Strategy?

This strategy can be advantageous when students are entering the program at varied stages. It allows students to meaningfully address problems from whatever stage they are at. In addition, it gives students practice in learning through their own actions.

When Should you Use the Constructivist Teaching Strategy?

The teacher should use this strategy when the focus is on posing a real-life problem, and when there is the assumption that the problem can be solved at many levels and by many routes.

How to Use the Constructivist Teaching Strategy

1. The teacher poses the problem. The student recognizes the problem.
2. The teacher requests possible solutions to the problem. The student provides the solution he or she anticipates using.
3. The teacher questions the chosen solution. The student recognizes blockage and disequilibrium.
4. The teacher provides opportunities for action and reflection. The student learns, reflects, and generates new solutions to the problem.
5. The teacher guides application of these new solutions. The student tries out and evaluates the solutions.
6. The teacher guides the transfer of these solutions to other situations. The student transfers these solutions to other situations.

References

DeRuiter, J. (1990). Constructivist perspective. Unpublished manuscript.

TEACHING THE ADULT LEARNER

Perennial Problem

What should be done about integrating the new basic skills into vocational education?

Practical Problem

What should be done to help teachers better understand the needs of the adult learner?

Justification for Lesson

Teachers today are working more and more frequently with adult learners. Teachers need to understand how adult learners are unique from other learners if they are to help adult learners acquire the new basic skills.

Learner Outcome

The learner will appreciate how the needs of adult learners differ from the needs of youth in the public schools.

The learner will examine personal perceptions of adult learners.

Instructor Resources

Handouts:
- Key — Learner Tendencies: Adolescents vs. Adults
- Concept Sheets (14 pages; large print; untitled)
- Concept Attainment Strategy

Supplies:
- Board, chalk, markers, etc.

Teaching Strategy Modeled

Concept Attainment Strategy

LESSON PLAN

Objectives:

Content:
The learner will give examples of how adults and children learn.

New Basic Skills:
The learner will identify the new basic skills practiced in this lesson.

Process:
The learner will evaluate the Concept Attainment Strategy.

Application:
The learner will be able to respond to the discrete needs of young and adult students when preparing lessons.

Teaching-Learning Interaction

Introduction:
Explain that in the lesson today the Concept Attainment Strategy will be used. Before the Teaching-Learning Interaction activity, a warm-up may be necessary to help students understand how the strategy works. An example of a warm-up is given below:

Write YES and NO on separate areas of the board. Silently select a concept which is visible in the students' dress (e.g., shoes with laces, striped shirts/blouses, glasses, buttoned shirts/blouses, jeans, etc.). Without explaining the concept, ask students to stand under either the YES or NO sign, beginning with a YES example, followed by a NO example, followed by another YES example. Once there are two YES examples, the students have clues as to the concept and can begin suggesting individuals to stand in either the YES or NO category. When students think they know what the concept is, ask them to please *don't* tell the answer. Instead, ask them to suggest an individual to stand in either the YES or NO category. If no one is ready to try, continue to direct students to either the YES or NO category, asking the group where they think an individual should go. Periodically, remind students to concentrate on the YES category, identifying what all these individuals have in common. Poll students occasionally as to who thinks they have the concept and wants to determine the next example. End the activity when it appears that most students have the concept. Ask a student to state the concept.

At the conclusion of the activity, have students examine their thinking processes by asking questions like the following: What were some of your initial conclusions as to the concept? Which clues made you change your mind? For those of you who determined the concept, which clue made it clear? What went through your mind as you considered the clues? How did you deal with the frustration of not knowing the concept? If frustration had gotten the best of you, what could you have done to continue productively with the activity?

Learning Activities:
Step 1:
When students are familiar with the Concept Attainment Strategy, begin presenting the Concept Sheets. Cut the sheets where marked. (A key titled Learner Tendencies: Adolescents vs. Adults is provided at the end of the lesson and in the Instructor Resources at the end of this book. It can be passed out to students as a summary of Adult Learner Tendencies.)

Teaching-Learning Interaction, continued

Learning Activities, continued
Put the Concept Sheets under the YES or NO category. Concentrate on the YES category, having students try to determine the concept illustrated by the examples. When a student has a hypothesis, ask the student to categorize the next example.

Follow the same procedure as in the warm-up activity. When most students have an idea of the concept, have them state it. With this particular Concept Attainment lesson, they may understand the concept but be unable to come up with the specific title of Adult Learner Tendencies. The following questions can be used to prompt students:

1. What are the similarities among the items on the YES list?
2. Whose interests are served on the YES list?
3. What is the image of learners reflected in the YES list?

Accept those answers that are in tune with the concept of Adult Learner Tendencies, helping students to recognize the relationships of their concepts to Adult Learner Tendencies.

Step 2:
Have learners discuss their thinking strategies, comparing the efficiency of their thinking in this activity with the warm-up activity.

Debriefing Strategies

Content:
Ask the following questions:

1. What examples would you add to the YES or NO categories?
2. What examples of adult learning have you experienced that match these learner tendencies?
3. Were any of the adult learner tendencies a surprise to you? Did they fit your perceptions of adult learners?
4. What are the implications for you as a teacher of adult learners?
5. Do adult learners need to possess the new basic skills?

Debriefing Strategies, continued

New Basic Skills:
During the lesson today, what new basic skills did you practice?

- Communication
- Adaptability
- Influence

Process:
Distribute the handout titled Concept Attainment Strategy and ask the following questions:

1. Based on your experience with this strategy, what are the important components of implementing it? (Share those components of planning which are not readily apparent to the participants.)

    - Do a warm-up activity using students as examples.
    - Differentiate at least eight positive examples of the concept and eight negative examples, making sure that each positive example contains all critical attributes of the concept.
    - In presenting new or difficult concepts, avoid distractors. In reviewing material or presenting relatively easy concepts, distractors can challenge the students.
    - Avoid clues which have nothing to do with the concept.
    - Alert students that they must not "blurt out" the concept. Instead, they should volunteer to place the next example in the correct category.
    - Sequence examples YES — NO — YES, then randomly. It is sometimes helpful to present the examples of medium difficulty first, the more difficult examples next, and the easiest examples last.
    - Keep reminding students to focus their attention on the YES category, looking for what these examples have in common.
    - Poll students periodically to see who has the concept. If students become frustrated, some "clues" can be helpful.
    - At the conclusion of the activity, if students are having trouble stating the concept, you may want to provide some clues.

Debriefing Strategies, continued

Process, continued:

2. What did you like and dislike about the Concept Attainment Strategy?
3. What are the benefits and drawbacks of using this strategy?

Evaluation Options

Content:

1. Have students interview an adult learner who is seeking a high school diploma or G.E.D. Assign a one page paper summarizing how the adult learner tendencies discussed in this lesson match the adult learner interviewed. Have students answer these questions in their papers: Are the new basic skills applicable to the adult learner interviewed? Why or why not?
2. Have students summarize in a one page paper how their perceptions of adult learners changed after studying adult learner tendencies.

Process:

Have students develop a Concept Attainment Activity in their subject areas following the outline below.

Name of Concept ______________________________

Essential Attributes of the Concept ____________________
____
____

Rule or Overriding Principle ____________________
____

Examples	Non-Examples
____________	____________
____________	____________
____________	____________
____________	____________
____________	____________

Evaluation Options, continued

Application:
Have students visit a classroom of adult learners. Ask students to compare the questions and concerns of these learners to those they might observe in a typical secondary classroom. Have students share their findings orally in class.

Individualized Learning Plan

If a student is learning this content in an individualized program, the student should be given the entire lesson. The student should read all materials. The college supervisor will designate which Evaluation Options will be required of the student. To demonstrate competency, the student should prepare to teach the lesson to a group designated by the college supervisor. Suggestions for such groups include: teacher groups, service organizations, youth groups, etc.

KEY

Learner Tendencies: Adolescents vs. Adults[1]

Adolescents	Adults
Depend upon others for material support, psychological support, and life management. They are other-directed.	Depend upon themselves for material support and life management. Although they must still meet many psychological needs through others, they are largely self-directed.
Perceive one of their major roles in life to be that of learner.	Perceive themselves to be doers — using previous learning to achieve success.
Learn what they are told to learn.	Learn best when they perceive the outcomes of the learning process as valuable — contributing to their own development, work success, etc.
View the established learning content as important because they are told it is important.	Often have very different ideas about what is important to learn.
As a group within educational settings, they are much alike. They're approximately the same age, come from similar socioeconomic backgrounds, etc.	Are very different from each other. Groups are likely to be composed of persons of different ages, backgrounds, educational levels, etc.
Perceive time differently than older people do. Our perception of time changes as we age — time seems to pass more quickly as we get older.	Are more concerned about the effective use of time.
Have a limited experience base.	Have a broad, rich experience base to which to relate new learning.

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[1] Kalamas, D. (1987). Module N-1, prepare to work with adult learners (of category N — teaching adults). Athens, GA: American Association for Vocational Instructional Materials, p. 10.

Key, continued

Adolescents	Adults
Generally learn quickly.	For the most part, learn more slowly, but they learn just as well. They also have the added advantage of superior judgment.
Are open to new information and will readily adjust their views.	Are much more likely to reject or explain away new information that contradicts their beliefs.
Readiness to learn is linked to both academic development and biological development.	Readiness to learn is more directly linked to need — needs related to fulfilling their other roles and coping with life changes.
Learn (at least in part) because learning will be of use in the future.	Are more concerned with the immediate applicability of learning.
Are often externally motivated (by the promise of good grades, praise, etc.)	Are more often internally motivated (by the potential for feelings of worth, self-esteem, achievement, etc.).
Have less well-formed sets of expectations in terms of formal learning experiences. Their "filter" of past experiences is limited.	Have well-formed expectations which, unfortunately, are sometimes negative because they are based upon unpleasant past formal learning experiences.

Depend upon others for material support, psychological support, and life management. They are other-directed.

(cut here)

Perceive one of their major roles in life to be that of learner.

Learn what they are told to learn.

(cut here)

As a group within educational settings, they are much alike. They're approximately the same age, come from similar socioeconomic backgrounds, etc.

View the established learning content as important because they are told it is important.

(cut here)

Have a limited experience base.

Perceive time differently than older people do. Our perception of time changes as we age — time seems to pass more quickly as we get older.

(cut here)

Generally learn quickly.

Are open to new information and will readily adjust their views.

(cut here)

Readiness to learn is linked to both academic development and biological development.

Learn (at least in part) because learning will be of use in the future.

(cut here)

Are often externally motivated (by the promise of good grades, praise, etc.)

Have less well-formed sets of expectations in terms of formal learning experiences. Their “filter” of past experiences is limited.

(cut here)

Perceive themselves to be doers — using previous learning to achieve success.

Depend upon themselves for material support and life management. Although they must still meet many psychological needs through others, they are largely self-directed.

Often have very different ideas about what is important to learn.

(cut here)

Learn best when they perceive the outcomes of the learning process as valuable — contributing to their own development, work success, etc.

Are very different from each other. Groups are likely to be composed of persons of different ages, backgrounds, educational levels, etc.

(cut here)

Are more concerned about the effective use of time.

Have a broad, rich experience base to which to relate new learning.

(cut here)

For the most part, learn more slowly, but they learn just as well. They also have the added advantage of superior judgment.

Colorado State University, 1992.

Are much more likely to reject or explain away new information that contradicts their beliefs.

(cut here)

Are more often internally motivated (by the potential for feelings of worth, self-esteem, achievement, etc.).

Readiness to learn is more directly linked to need — needs related to fulfilling their other roles and coping with life changes.

(cut here)

Are more concerned with the immediate applicability of learning.

Have well-formed expectations which, unfortunately, are sometimes negative because they are based upon unpleasant past formal learning experiences.

Concept Attainment Strategy

What is the Concept Attainment Strategy?

The Concept Attainment Strategy compares and contrasts items (sometimes called exemplars) that contain certain characteristics (sometimes called attributes) with items that do not contain those characteristics. It is a method of categorizing information — identifying and placing events into classes by using certain clues (criteria) and ignoring others.

Why Use the Concept Attainment Strategy?

The Concept Attainment Strategy helps students (a) recognize examples of key concepts or definitions, (b) use information to form and test hypotheses, (c) separate the relevant from the irrelevant, and (d) correctly explain definitions and examples.

When Should You Use the Concept Attainment Strategy?

Teachers can use this strategy to help students develop definitions correctly, separate important and unimportant information on any topic, and use critical thinking to determine relevant examples of a concept.

How to Use the Concept Attainment Strategy

This strategy includes three steps: presenting examples, refining understanding, and providing practice.

In the first step, the teacher should select a concept and organize exemplars into two groups: positive (those that are like the concept) and negative (those that are not like the concept). The teacher should present these as Yes and No exemplars.

In the second step, the teacher should ask students to describe the attributes of the concept after they generate a list of attributes from the exemplars. Students should then be able to name the concept.

In the third step, the teacher should ask students to identify additional exemplars of the concept.

Concept Attainment Strategy, continued

Things to Remember

1. Each positive exemplar must contain all the essential attributes of the concept.
2. Arrange the exemplars so that students can distinguish the essential attributes from the nonessential attributes.

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INSTRUCTOR RESOURCES

LESSON: SOCIAL CONDITIONS OF YOUTH

The Socioeconomic Conditions of Youth

FROM: Hodgkinson, Harold. (1991, September). Reform versus reality. Phi Delta Kappan, 73(1), pp. 8-16.

☑ Since 1987, one quarter of all preschool children in the U.S. have lived in poverty.

☑ 350,000 children are born each year to mothers who are addicted to cocaine during pregnancy.

☑ Today, at least 15 million children are being reared by single mothers whose individual incomes averages $11,400. (The average family income for a married couple with children is approximately $34,000 a year.)

☑ The nuclear family with a father who works, a mother who stays home with the children, and two children in school represents only 6% of families today.

☑ One quarter of pregnant women receive no prenatal care in the crucial first trimester. If these women received one examination during this time, we would have 20% fewer handicapped children in schools.

☑ About two million children are latchkey children. They have no adult supervision after school until an adult returns from work.

☑ Every night, 50,000 to 200,000 children are without a home. Families with children accounted for 40% of shelter use in 1988.

☑ Since 1970, there has been a 678% increase in children being raised by mothers who never married; 2.5 million fathers are raising children alone.

☑ Only one quarter of the people who vote in elections have children in school.

☑ Generally, states with the lowest high school dropout rates also have the lowest number of people in prison. Over 80% of prisoners are high school dropouts.

The Socioeconomic Conditions of Youth, continued

Youth in Crisis — Is America Making the Grade?
Barbara Walters Special News Report

☑ 13% of U.S. high school graduates read below the sixth grade level.

☑ One out of every four children drops out of school.

☑ The leading causes of death to children are drug- and alcohol-related violence and traffic crashes.

☑ 40% of young women become pregnant before they are 20.

Associated Press, 3/19/90

☑ Among six industrialized countries, the U.S. and Australia have the highest poverty rates among families with children. At least 99% of poor families with children in the other developed countries receive government assistance.

☑ The U.S. has the highest rate of teenage pregnancy.

☑ The murder rate of male youths in the U.S. is four to five times higher than the rates in other developed countries.

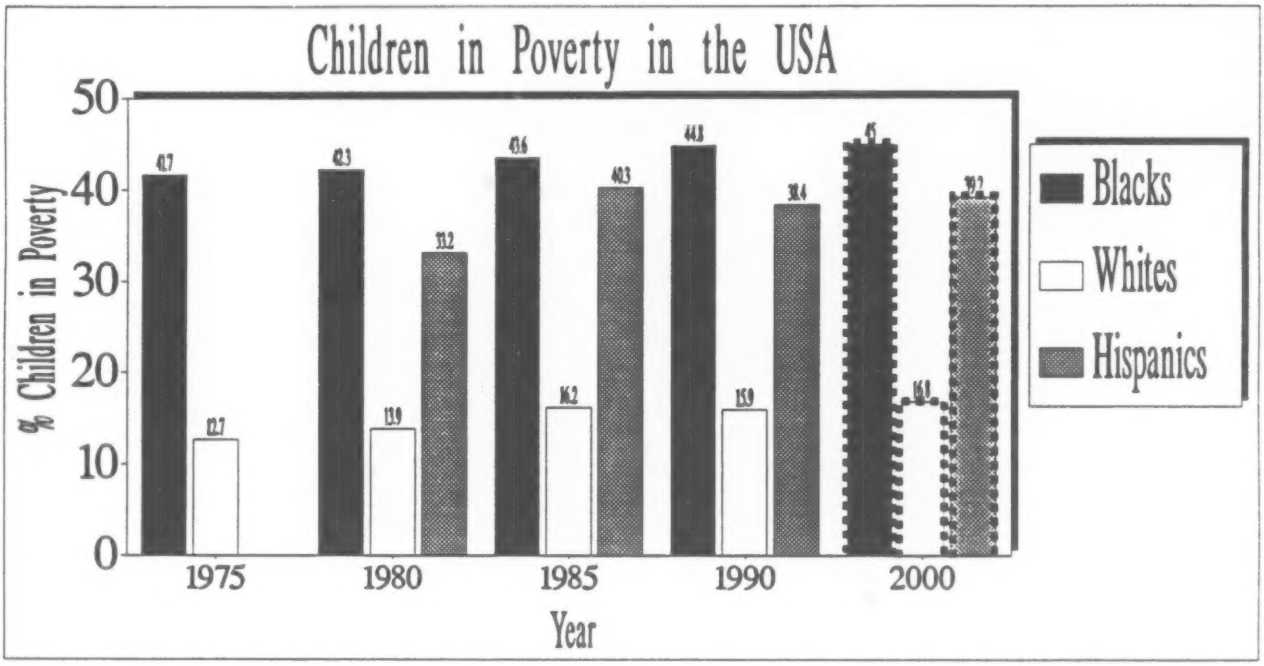
The Socioeconomic Conditions of Youth, continued

The State of American Youth, 1990

☑ Following are the top ten concerns of 3,000 17-19 year olds (from a 1989 University of Michigan study):

- having a good marriage and family life
- choosing a career and finding steady work
- doing well in school
- being successful in one's line of work
- having strong friendships
- paying for college
- preserving the country's status
- making a lot of money
- finding purpose and meaning in life
- avoiding AIDS

The Socioeconomic Conditions of Youth, continued

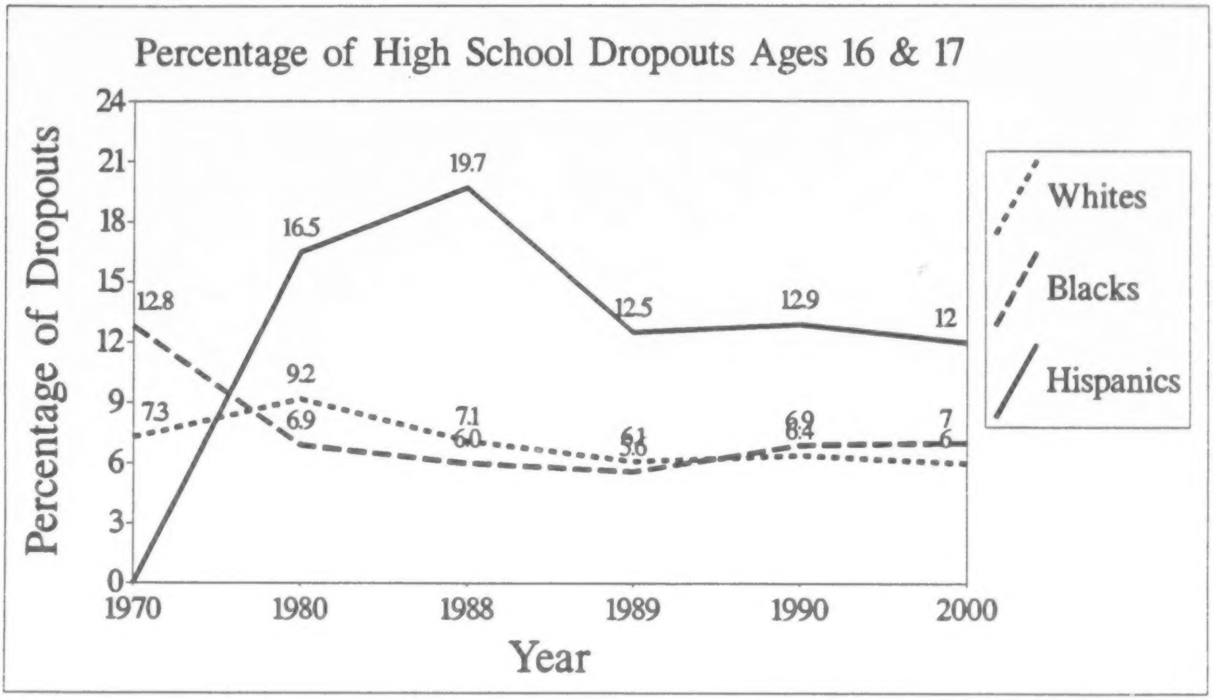


*1975 statistics for Hispanics were not available.

▪▪▪▪▪▪▪ = Projections for the year 2000

Source: Poverty in the United States, 1990

The Socioeconomic Conditions of Youth, continued

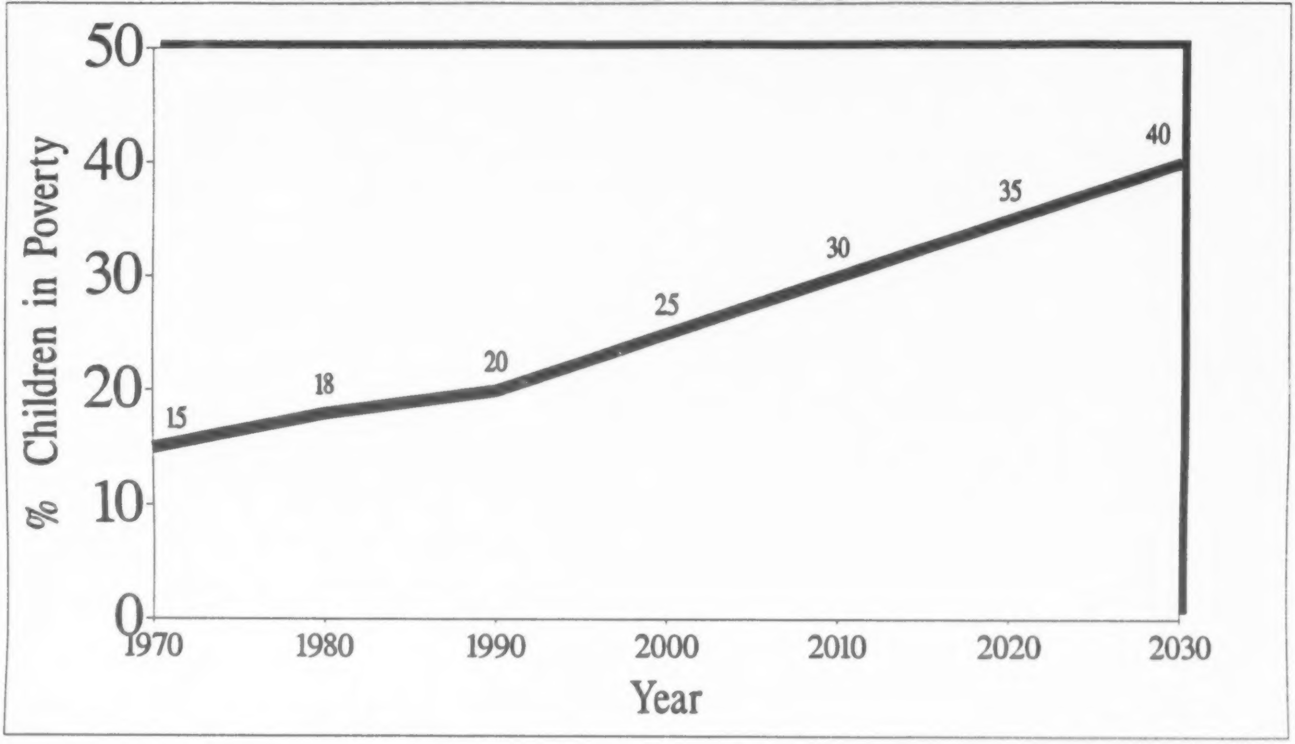


*1970 statistics for Hispanics were not available.

Source: US Bureau of the Census, June 1991

The Socioeconomic Conditions of Youth, continued

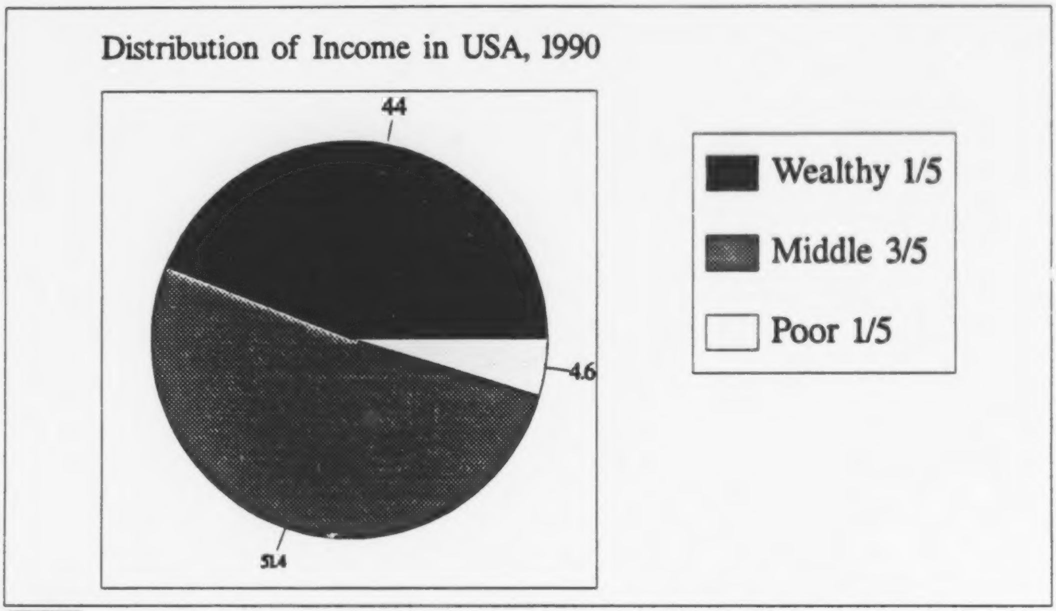
America's Children Are Getting Poorer While the Nation Gets Richer



- ☑ In the year 2000, if recent trends continue, there will be 16 million poor children in the United States, 3 million more than in 1987. One in every four children will be poor.
- ☑ By the year 2030, there will be 25 million poor children. One in every three children will be poor.

Source: CDF computations based on Census Bureau data.

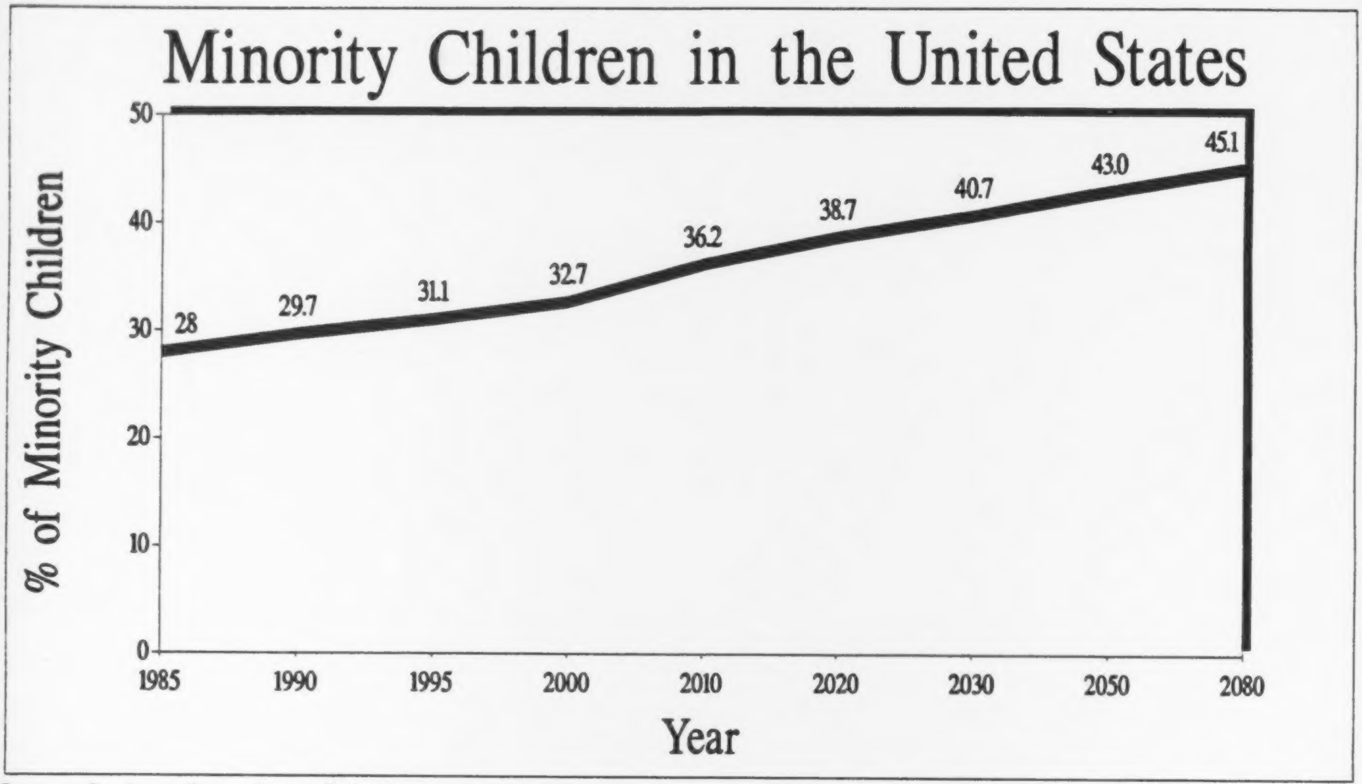
The Socioeconomic Conditions of Youth, continued


Distribution of Income in USA, 1990

Note: Top 1% of families had more income than the bottom 40% combined.

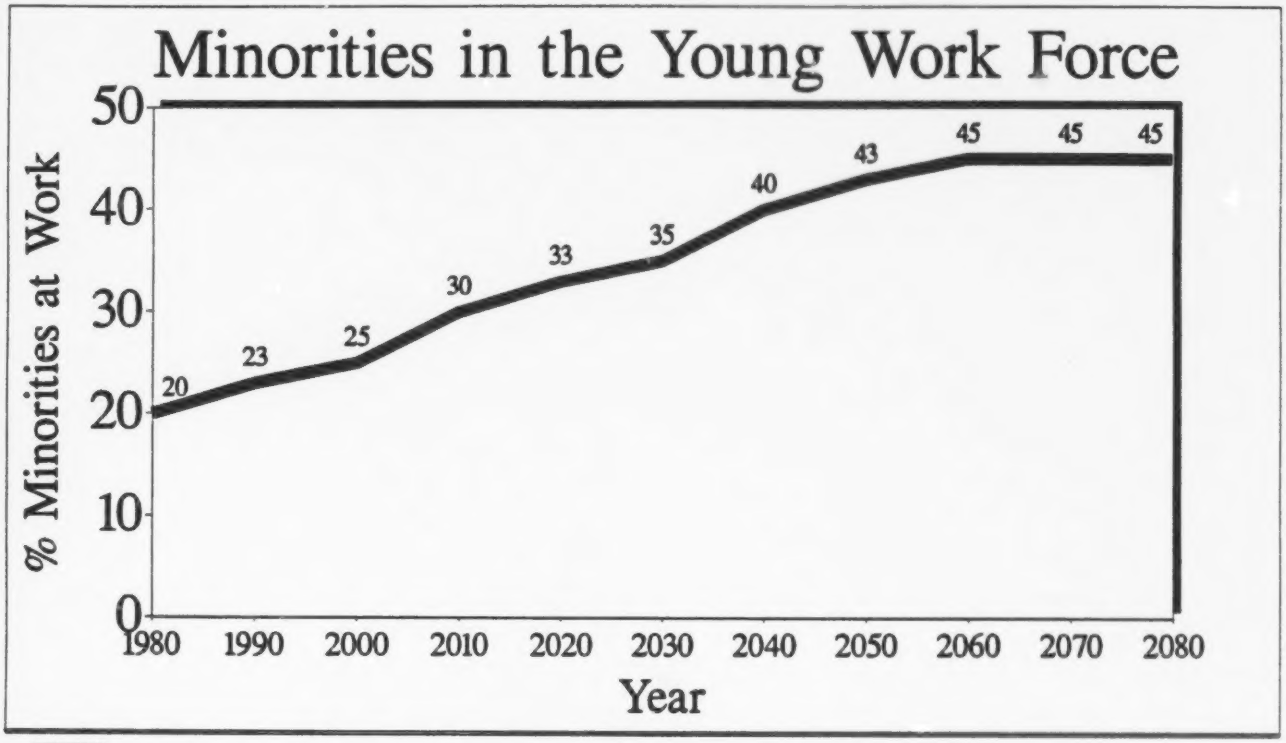
Source: American Behavioral Scientist, January/February 1992

The Socioeconomic Conditions of Youth, continued



Source: Based on Census Bureau Projections

The Socioeconomic Conditions of Youth, continued



☑ • Nearly one third of the nation's 18-24 year-olds will be minorities in 2000, compared with less than one-quarter in 1985.

☑ • There will be 26 percent fewer white, non-Hispanic 18 to 24 year-olds in the year 2030 than there were in 1985.

Source: Based on Census Bureau projections.

Taba Inductive Thinking Strategy

What is the Taba Inductive Thinking Strategy?

The Taba Inductive Thinking Strategy is a method to help students think logically when organizing large amounts of information. It helps develop sequential thinking.

Why Use the Taba Inductive Thinking Strategy?

This strategy can be beneficial when students need to process data in ways that involve many or complicated steps. It also encourages students to extend their thinking, regarding data creatively. This higher level thinking can help students grow in cognitive, intuitive, and affective areas of development.

When Should You Use the Taba Inductive Thinking Strategy?

This strategy is especially useful when students must process large amounts of data. It is also useful in teaching the sequential steps of the thinking process and how to use specific thinking methods systematically to solve everyday problems. Teachers may use this strategy when they are requiring students to expand their thinking capability, moving from a simple to a complex level. Successful use of the Taba Inductive Thinking Strategy results in students being better able to evaluate themselves and direct their own thinking.

How to Use the Taba Inductive Thinking Strategy

The thinking tasks of the model include four steps: concept formation, interpretation of data, application of generalizations, and resolution of conflict.

1. concept formation — identifying and enumerating data relevant to a problem, grouping these data according to some basis of similarity, and developing categories and labels for the groups
2. interpretation of data — interpreting, making inferences from, and developing generalizations about the data
3. application of generalizations — predicting consequences from hypothetical conditions involving the data, and explaining unfamiliar data
4. resolution of conflict — stating the issues involving the data, using some of the data to support an argument, and interpreting

Colorado State University, 1992.

Taba Inductive Thinking Strategy, continued

Teachers lead students through these four steps (each of which requires a different level of thinking) using open ended questions. These include focusing questions, questions calling for variety, questions calling for clarification or extension, and questions calling for reasons or support for ideas.

Debriefing the Taba Inductive Thinking Strategy

Debriefing is important. It gives students a chance to articulate the logical, sequential steps of thinking. Teacher educators should encourage their students to reflect on the efficacy of "questioning techniques" in promoting different levels of thinking. They should also reflect on the impact of using such techniques in the classroom.

Things to Remember

1. Match the eliciting questions to the specific cognitive tasks within each strategy.
2. Place cognitive tasks in optimal order.
3. Carefully monitor how students are processing the information.

References

Brantley, H., & Washington, S. M. (1990). Using higher level questioning as a method to improve evaluation of language skills. (ERIC Document Reproduction Service ED 315 772)

Joyce, B., & Weil, M. (1986). Models of teaching. Englewood Cliffs, NJ: Prentice-Hall, Inc.

"All Students Are Valuable to Society!"

INSTRUCTOR RESOURCES

LESSON: LEARNING STYLES

Gregorc Learning Style Delineator

Anthony F. Gregorc, Ph.D.

1. **REFERENCE POINT.** You must assess the relative value of the words in each group using your SELF as a reference point; that is, who you are deep down, NOT who you are at home, at work, at school, or who you would like to be or feel you ought to be. THE REAL YOU MUST BE THE REFERENCE POINT.

2. **WORDS.** The words used in the Gregorc Style Delineator matrix are not parallel in construction, nor are they all adjectives or all nouns. This was done on purpose. Just react to the words as they are presented.

3. **RANK.** Rank in order the ten sets of four words. Put a **4** in the space above the word in each set which is the best and most powerful descriptor of your SELF. Give a **3** to the word which is the next most like you, a **2** to the next, and a **1** to the word which is least descriptive of your self. Each word in a set must have a ranking of **4, 3, 2, or 1**. No two words in a set can have the same rank.

4. **REACT.** To rank the words in a set, react to your **first impressions.** There are no right or wrong answers. The real, deep-down you is best revealed through a first impression. Go with it. Analyzing each group will obscure the qualities of SELF sought by the Delineator.

5. **PROCEED.** Continue to rank all ten **vertical** columns or words, one set at a time.

6. **TIME.** Recommended time for word ranking is **four minutes.**

7. **SCORING.** To score, first add the numbers **across,** then add the numbers **down.**

Gregorc Learning Style Delineator, continued

1	2	3	4	5	Total			
____ objective	____ perfectionist	____ solid	____ practical	____ careful w/detail				
____ evaluative	____ research	____ quality	____ rational	____ ideas				
____ sensitive	____ colorful	____ nonjudgmental	____ lively	____ aware				
____ intuitive	____ risk-taker	____ insightful	____ perceptive	____ creative				
6	7	8	9	10				
____ thorough	____ realistic	____ ordered	____ persistent	____ product-oriented				
____ logical	____ referential	____ proof	____ analytical	____ judge				
____ spontaneous	____ empathy	____ attuned	____ aesthetic	____ person-oriented				
____ troubleshooter	____ innovative	____ multi-solutions	____ experimenting	____ practical dreamer				
					CS	AS	AR	CR

Gregorc Learning Style Summary Sheet I

CONCRETE SEQUENTIAL ____%		ABSTRACT SEQUENTIAL ____%	
Concrete	Hands-on	Abstract	Conceptual
Sequential	Step-by-step	Sequential	Logical
Organized	Structured	Ordered	Intellectual
Thorough	Precise	Thinker	Inquisitive
Detailed	Reliable	Thorough	Argumentative
Steady	Cautious	Critical	Analytical
Practical	Realistic	Standards	Rational
Objective	Industrious	Reasoning	Unemotional
Competent	On time	Studious	Evaluate
To-the-point	Predictable	Challenge	Enthusiastic
Factual	Task-oriented	Precise	Clumsy
Reliable	Steadfast	Student	Excellence
Perfectionist	Active	Writers	Detached
Physical	Trustworthy	Scholarly	Structured
Hands-on	Demonstration	Reading	Lecture
Computers	Field trips	Writing essays	No competition
Short Lecture	Flowcharts	No time pressure	Work alone
Outlines	Labs	Library work	Research
Involvement	Charts	Thinking tasks	Experts

CONCRETE RANDOM ____%		ABSTRACT RANDOM ____%	
Concrete	Real world	Abstract	Emotional
Random	Nonlinear	Random	Nonlinear
Flexible	Independent	Flexible	Adaptable
Leaders	Creative	Open	Sensitive
Unusual	Experimental	Pleasers	Interpretive
Investigative	Curious	Personalize	Aesthetic
Intuitive	Leaps of thought	Imaginative	Colorful
Variety	Changing	Expressive	Relationships
Inquisitive	Insight	Sympathetic	Warm
Trial & error	Risk-takers	Supportive	Subjective
Daring	Different	Friendly	Sociable
Rebellious	Divergent	Understanding	Empathetic
Original	Inventive	Emotional	Reflective
Procrastinate	Process	Cooperative	Metaphorical
Problem-solve	Experiments	Discussion	Coop. learning
Options	Simulations	Role play	Short lecture
Inventing	Projects	Arts	Humor
Discovery	Role Playing	Television	Fantasy
Brain-teaser	Design	Themes	Personalized

Colorado State University, 1992.

Learning Styles, H—2a

Gregorc Learning Style Summary Sheet II

How To Recognize

Concrete Sequential Students

Take notes in outline form — thorough
Like labs, hands-on demonstrations
Are well organized
Are exact in their work
Want specific answers
See things through to the end
Follow directions
Are not risk-takers
Want learning to be useful
Like objective tests
Like immediate results
Put effort into work
Pay attention to deadlines
Ask lots of questions about specifics of assignments
Read directions
Like to sit in same place in class
Don't like changes in assignments/routines
Like exact, structured work
Like memorization
Proceed step-by-step
Give to-the-point answers
Take things at face value
Don't like group work — would rather work alone
Need to be prepared for changes

Abstract Sequential Students

Like to talk about ideas
Like to debate
Love to read and write — read quickly and easily
Have a large vocabulary
Are predictable
Write long papers
Are thorough in assignments
Like quiet to work
Are responsible to law
Appear smart in book knowledge
Like to think through ideas rather than work on a project
Like learning for learning's sake
Want teachers to be experts — may challenge
Need time to gather information and reach conclusions
Are intellectual diplomats or argumentative debaters
Want to know how and why
Read too much into questions
Have high standards
Accept only A's for themselves
Like to work alone
Focus on content and theories
Like library work
Think rationally and logically
Learn well through lecture
Follow directions if directions aren't picky
Like standardized tests
Feel clumsy with projects

Colorado State University, 1992.

Gregorc Learning Style Summary Sheet III

How To Recognize

Concrete Random Students

Like to discover the answers to problems
Are non-linear thinkers
Are flexible
Compete with themselves, not others
Are independent
Are willing to be different — creative
Give out-of-the-ordinary answers
Like to be leaders
Like to experiment — "What If"
Work within general guidelines
Like to explore possible answers
Know answers without knowing how they got them — no step-by-step process
Have leaps of thought
Like change, variety, options, choices
Lose track of time when involved
Consider process more important than end results
Like problem solving
Like simulations
Take a trial and error approach to learning
Like the unusual
Don't like to be controlled (fenced in)
Don't like structured assignments
Are procrastinators
Don't need many details
Not concerned if tasks unfinished

Abstract Random Students

Filter through emotions
Don't read directions
Need time for reflection
May have difficulty categorizing
Like flexible time schedules
Tune into "vibrations"
Adjust to changes easily
Are sensitive — like to be open with teachers
Work to please others
Worry about what others think
Personalize learning
Like the arts
Are colorful
Are daydreamers
Experience imagined fears
Express feelings openly
Are spontaneous
Consider relationships important
Are sympathetic, warm hearted
Are good listeners
Like group work
Like thematic learning
Like people oriented subjects
Give away feelings in facial expressions
Are easily hurt
Maintain friendly relationship with teacher
Have overactive imaginations
Like metaphors
Don't like overly structured assignments
Don't like objective tests

Colorado State University, 1992.

Cooperative Learning Strategy

What is the Cooperative Learning Strategy?

Group work can be a valuable learning technique. However, group work may prove less effective than hoped if students are unable to interact well. Cooperative learning is a structured technique which uses peer tutoring, group investigation, and cooperation to encourage student learning. In addition, it teaches the importance of group work through the use of content, dividing the learning process into pieces and giving individuals and small groups ownership of the content being taught.

Why Use the Cooperative Learning Strategy?

The purposes of this strategy are (1) to increase achievement through group collaboration, enabling students to learn from each other, (2) to use cooperation and peer instruction to benefit both high and low ability students, and (3) to improve human relations between races and ethnic groups in the classroom by promoting interdependent activities that teach collaborative skills.

When Should You Use the Cooperative Learning Strategy?

Teachers can use the Cooperative Learning Strategy effectively when they want to decrease emphasis on competitive or individualistic learning methods. Teachers can use this strategy to teach cooperative skills and academic skills simultaneously. It is also helpful when a teacher feels that a class is not working as a team, when individuals with good ideas are being shut out, or when one or two students are monopolizing discussion.

How to Use the Cooperative Learning Strategy

Cooperative small group learning involves four basic elements:

1. interdependence among students seeking mutual goals through combined efforts (the interdependence must be structured, usually through the use of shared resources)
2. face-to-face interaction among students
3. group and individual accountability for mastery of the material covered
4. appropriate use of interpersonal and small group skills by students

Colorado State University, 1992.

Cooperative Learning Strategy, continued

The teacher's role in structuring cooperative learning situations involves these elements: (a) clearly specifying lesson objectives, (b) placing students in productive learning groups, (c) providing appropriate materials, (d) clearly explaining the cooperative goal structure, (e) monitoring students, (f) giving specific assignments to each student within a group, and (g) evaluating performance.

Debriefing the Cooperative Learning Strategy

Debriefing gives students the chance to articulate the specific skills they have developed or honed through the practice of this strategy. These skills would include:

1. Interpersonal effectiveness
2. Communication
3. Integration of process with content
4. Teamwork
5. Appreciation of others' contributions (multiple intelligences)

Things to Remember

1. Each group only receives one set of materials.
2. Each individual within the group has a role and responsibility.
3. Each individual within the group is accountable to report and support the group decisions.
4. Each group must debrief their group interaction skills.

References

Gardner, H. (1983). Frames of mind: The theory of multiple intelligences. New York: Basic Books, Inc.

Kindsvatter, R., Wilen, W., & Ishler, M. (1992). Dynamics of effective teaching. White Plains, NY: Longman Publishing Group.

Calvin Woodward Poem

Hail to the skillful, cunning hand!

Hail to the cultured mind!

Contending for the world's command,

Here let them be combined!

Calvin Woodward
(1827-1914)
Technology Educator

INSTRUCTOR RESOURCES

LESSON: SPECIAL POPULATIONS

Realistic Alternatives for a Mainstream Teacher[1]

Adaptations that Facilitate Mainstreaming

Classroom Organization
vary grouping arrangement
vary methods of instruction

Classroom Management
vary grading system
vary reinforcement systems
vary rules

Methods of Presentation
vary content
vary general structure
vary type
modify curriculum

Methods of Practice
vary general structure
vary level of response
vary type of materials

Methods of Testing
vary type
vary general structure
vary level of response

Special Assistance
resources within the school
resources outside the school

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[1] Reprinted with permission from Kay Cessna, Colorado Department of Education.

Realistic Alternatives for a Mainstream Teacher, continued

Classroom Organization	Classroom Management	Methods of Presentation	Methods of Practice	Methods of Testing
Vary Grouping Arrangement Large group instruction Small group instruction Individual instruction Peer tutoring Independent self-instructional activities Learning center *Vary Methods of Instruction* Teacher directed Student directed	*Vary Grading System* Homework Tests Class discussion Special projects *Vary Reinforcement Systems* Praise Notes sent home Grades Free time Special activity Tangibles Progress charts *Vary Rules* Differentiated for some students Explicit/implicit discussion	*Vary Content* Amount to be learned Time to learn new information Conceptual level *Vary General Structure* Advanced organizers Previewing question *Vary Type* Verbal-lecture Written-texts Worksheets Demonstration Audiovisuals Tape recorders Filmstrips Movies Opaque projectors Transparencies	*Vary General Structure* Amount to be practiced Time for practice Group/individual Teacher directed/independent Items ranging from easy to difficult *Vary Level of Response* Copying Recognition Recall with cues *Vary Type of Materials* Worksheets Tests Audiovisuals	*Vary Type* Verbal Written Demonstration *Vary General Structure* Group/individual Amount to be tested Time for completion *Vary Level of Response* Recognition Recall with cues Recall

Colorado State University, 1992.

Realistic Alternatives for a Mainstream Teacher, continued

Possible Intervention Strategies

The following are examples of possible intervention strategies or educational alternatives supporting mainstreaming. Intervention strategies must be individualized to address specific problems. Please note that these suggestions are not intended to be exhaustive, but are presented as guidelines.

A. Modified Curriculum

1. Change academic level
   a. provide an easier instructional level
   b. provide a more difficult instructional level
2. Change teacher expectation
   a. reduce teacher expectation for student performance (e.g., reduce assignment load)
   b. increase teacher expectation for student performance
3. Change teacher methodology
   a. present more visual cues
   b. present more auditory cues
   c. provide more combined cues in presenting information
   d. provide more remedial lessons for deficient academic skills
   e. give verbal instructions for each assignment
   f. arrange for a "buddy system" so that student can ask additional questions, check assignment, etc.
   g. change instructional strategies (e.g., (1) student is having difficulty with copying from board, so teacher provides a worksheet at the desk from which student is allowed to copy, (2) student has difficulty making sound/symbol association, so teacher switches from a phonetic to a visual approach to teach reading)
   h. change curriculum materials
   i. tape lessons student cannot read
   j. use multisensory materials

B. Modified Structure

1. Change student's schedule
2. Change student's class
3. Change student's teacher
4. Move student's seat for specific purpose
   a. provide closer reach contact
   b. move student closer to chalkboard

Realistic Alternatives for a Mainstream Teacher, continued

 - c. move student closer to teacher when instructions are given
 - d. move student from disruptive influences: distracting window, noise, or students

5. Provide study carrel
6. Provide isolated area of work within the classroom
7. Reduce school day
8. Provide relaxation time
9. Modify lighting
10. Provide small groups or one to one contact
11. Keep student in after school and/or at recess
12. Use in or out of school suspension

C. Special Assistance

1. Use resources within school
    - a. implement Chapter 1 program
    - b. implement small group sessions with reading specialist
    - c. arrange placement in another program
    - d. arrange individual or group counseling with psychologist, counselor, or social worker
    - e. provide peer tutoring or counseling
    - f. provide volunteer tutoring
    - g. recommend summer school
    - h. recommend alternative/transition classes in school
    - i. recommend homebound instruction
    - j. arrange family assistance by school social worker
    - k. arrange grade level reassignment
    - l. support home/school communication
    - m. arrange parent conferences
    - n. use classroom aides
2. Use resources outside school
    - a. suggest individual or group counseling for student
    - b. suggest family counseling/therapy
    - c. suggest private tutoring
    - d. suggest involvement from outside agency
    - e. suggest relaxation time
    - f. suggest evaluation for medication
    - g. suggest medical checkup
    - h. suggest neurology clinic
    - i. suggest other agency help (Horizons, Social Services, etc.)

Realistic Alternatives for a Mainstream Teacher, continued

D. Classroom Management Procedures

1. Institute positive reinforcement for academic or social behavior
    a. keep a star or other recognition chart
    b. bestow free time or extra privilege
    c. use grades
    d. bestow praise
    e. use food
    f. implement a token economy
2. Institute negative reinforcement for academic or social behavior
    a. use time out
    b. ignore behavior
    c. withhold reward or privilege
3. Provide sessions for entire class on appropriate behavior; sessions led by counselor, psychologist, and/or social worker
4. Use timer
5. Post class rules
6. Limit or expand choices for student
7. Provide a stress outlet

Modifications in Written Language

For students who have difficulty with the mechanical production of writing:

- allow computer use for written work
- allow sufficient time to complete written work
- give a choice of printing or cursive writing
- give faded prompts for learning cursive or printing
- talk through letter formulas
- use non-skid matter under paper, or use clipboard or tape to keep paper in place
- emphasize good posture
- allow different writing materials (crayons, grippers, different sizes of pencils, etc.); also different types of paper (wide ruled, etc.)
- allow use of #2 pencils rather than hard leads
- avoid colored paper
- keep regular pencils on hand

Colorado State University, 1992.

Realistic Alternatives for a Mainstream Teacher, continued

For students who have difficulty taking notes:

- allow use of a tape recorder
- dictate important information and have the student copy it
- have one student use carbon paper; give copy to the student with the writing difficulty
- provide an outline or copy of lecture notes
- encourage drawing pictures for note taking if this is helpful
- use standardized notebook sheets with spaces designated for topic, notes, and assignments
- copy written material and highlight important information for the student

For students who have difficulty organizing their written work:

- provide an example or model of the required response
- provide a darker copy underneath the student's paper to show where to indent
- have consistent requirements for written work in all classes — reference both TDC (topic, detail, conclusion) and sandwich ideas; also have consistent requirements for headings, etc.
- put numbers down the side of the page for math problems

To encourage expression of ideas in written form:

- don't penalize for spelling
- give credit for ideas and concepts; accept approximations

For students who have difficulty taking written tests:

- allow answers to be expressed pictorially or verbally
- allow demonstrations rather than written work
- allow computer use for test taking
- allow sufficient time to complete tests

Modifications in Reading

Formats which are easier for students to read:

- use pictures, graphics, visuals, etc., to help explain written material
- get large print editions or use enlarger on photocopy machine
- double space written material whenever possible
- on a computer, use plain fonts; avoid use of dot matrix printers
- print directions rather than using cursive

Colorado State University, 1992.

Realistic Alternatives for a Mainstream Teacher, continued

- avoid hyphenated words
- be careful of copy quality; purple dittos are difficult
- avoid contractions

Ideas to help students get the most information from reading material:

- provide an outline
- highlight important information
- provide reading materials at a lower reading level
- institute buddy reading
- rewrite directions in simple, concise language
- list and review vocabulary words
- choose encyclopedias carefully — reading level and number of illustrations vary considerably from one to another
- use rebus symbols above difficult words
- keep reference materials handy (dictionary, etc.)

Adjustments in assignments for students who have difficulty reading:

- reduce the amount of reading required
- allow students to choose which comprehension questions to answer (work any 10, work any five odd, etc.)
- modify the objectives of the lesson; the handicapped student should be able to meet some of the objectives of the lesson, but not all
- use a whole language approach (may need extra conferencing; the student may not be as easily self directed)

Ideas to help students gain information by means other than reading:

- have someone read materials into a tape recorder so that the student can listen
- use three dimensional examples (globes, etc.)

Modifications in Mathematics

Ideas for students who have difficulty organizing their work:

- turn lined paper sideways to help with keeping numbers aligned
- photocopy pages from the book
- enlarge problems

Realistic Alternatives for a Mainstream Teacher, continued

Ideas for students who have difficulty with math facts:

- develop tricks for learning math facts; let students help make them up
- allow the use of calculators or multiplication tables
- develop rate of response so that math facts become automatic (precision teaching, reference chart)

Ideas for students who have difficulty understanding math concepts:

- make problems realistic and meaningful
- use manipulatives

Other ideas:

- develop left-handed papers, so that left-handed students' hands don't cover up questions or examples as they work
- let whoever finishes first put his or her name on the board; let this person pair up with the second finisher to correct papers; if they come up with different answers, let them work together to solve the problem
- post charts that list the steps in particular math processes
- use touch math
- use decks of cards that have dots and numbers

Methods for Presentation of Information

Ideas for students who learn best through different modalities and learning styles:

- use hands-on materials (charts, objects, graphs, etc.)
- use movement
- use role playing
- use film strips, movies, opaque projectors, videos
- use experiential learning
- use cooperative learning
- break assignments into steps

Ideas for using audiovisual equipment:

- use an outline, cover with paper, and move down
- use a marker with a single cutout so that only one sentence shows at a time

Realistic Alternatives for a Mainstream Teacher, continued

- use different colored markers on an overhead or flipchart for emphasis
- leave some lights on for note taking
- cue what's important in the film, i.e., provide an outline before hand, stop the film and discuss at various points (videos may be easier for stopping and discussing), and turn down the volume during irrelevant material

Ideas for presenting information in lecture format:

- before the lesson, distribute an outline of the material to be covered
- tape lectures to make them accessible to students who were absent when they were given, students who wish to listen to them again, or the special education teacher
- cue important information by using different types of print, different colors
- underline key words in handouts; tell students what's important in the lecture
- associate information with cues, especially in science and math

Other ideas to work on:

- notebook organization
- study skills
- problem solving
- decision making
- time management — calendars, assignment sheets, homework logs
- consistent routines throughout school or at least grade level
- staff organization, mentoring, teaming
- individualization (easier to individualize with hands-on projects)
- importance of inservice and preparation of staff and students regarding integration/inclusive classrooms
- how to have handicapped students truly included in the classroom, rather than being a separate group within the larger class
- self advocacy — how to not rescue so much, and help students take responsibility for their own learning
- interdisciplinary units

Constructivist Teaching Strategy

What is the Constructivist Teaching Strategy?

The Constructivist Teaching Strategy is based on the idea that learning proceeds through stages that cause qualitative changes in the organization of knowledge.

Why Use the Constructivist Teaching Strategy?

This strategy can be advantageous when students are entering the program at varied stages. It allows students to meaningfully address problems from whatever stage they are at. In addition, it gives students practice in learning through their own actions.

When Should you Use the Constructivist Teaching Strategy?

The teacher should use this strategy when the focus is on posing a real-life problem, and when there is the assumption that the problem can be solved at many levels and by many routes.

How to Use the Constructivist Teaching Strategy

1. The teacher poses the problem. The student recognizes the problem.
2. The teacher requests possible solutions to the problem. The student provides the solution he or she anticipates using.
3. The teacher questions the chosen solution. The student recognizes blockage and disequilibrium.
4. The teacher provides opportunities for action and reflection. The student learns, reflects, and generates new solutions to the problem.
5. The teacher guides application of these new solutions. The student tries out and evaluates the solutions.
6. The teacher guides the transfer of these solutions to other situations. The student transfers these solutions to other situations.

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DeRuiter, J. (1990). Constructivist perspective. Unpublished manuscript.

INSTRUCTOR RESOURCES

LESSON: TEACHING THE ADULT LEARNER

KEY

Learner Tendencies: Adolescents vs. Adults[2]

Adolescents	Adults
Depend upon others for material support, psychological support, and life management. They are other-directed.	Depend upon themselves for material support and life management. Although they must still meet many psychological needs through others, they are largely self-directed.
Perceive one of their major roles in life to be that of learner.	Perceive themselves to be doers — using previous learning to achieve success.
Learn what they are told to learn.	Learn best when they perceive the outcomes of the learning process as valuable — contributing to their own development, work success, etc.
View the established learning content as important because they are told it is important.	Often have very different ideas about what is important to learn.
As a group within educational settings, they are much alike. They're approximately the same age, come from similar socioeconomic backgrounds, etc.	Are very different from each other. Groups are likely to be composed of persons of different ages, backgrounds, educational levels, etc.
Perceive time differently than older people do. Our perception of time changes as we age — time seems to pass more quickly as we get older.	Are more concerned about the effective use of time.
Have a limited experience base.	Have a broad, rich experience base to which to relate new learning.

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[2] Kalamas, D. (1987). Module N-1, prepare to work with adult learners (of category N — teaching adults). Athens, GA: American Association for Vocational Instructional Materials, p. 10.

Key, continued

Adolescents	Adults
Generally learn quickly.	For the most part, learn more slowly, but they learn just as well. They also have the added advantage of superior judgment.
Are open to new information and will readily adjust their views.	Are much more likely to reject or explain away new information that contradicts their beliefs.
Readiness to learn is linked to both academic development and biological development.	Readiness to learn is more directly linked to need — needs related to fulfilling their other roles and coping with life changes.
Learn (at least in part) because learning will be of use in the future.	Are more concerned with the immediate applicability of learning.
Are often externally motivated (by the promise of good grades, praise, etc.)	Are more often internally motivated (by the potential for feelings of worth, self-esteem, achievement, etc.).
Have less well-formed sets of expectations in terms of formal learning experiences. Their "filter" of past experiences is limited.	Have well-formed expectations which, unfortunately, are sometimes negative because they are based upon unpleasant past formal learning experiences.

Depend upon others for material support, psychological support, and life management. They are other-directed.

(cut here)

Perceive one of their major roles in life to be that of learner.

Learn what they are told to learn.

(cut here)

As a group within educational settings, they are much alike. They're approximately the same age, come from similar socioeconomic backgrounds, etc.

View the established learning content as important because they are told it is important.

(cut here)

Have a limited experience base.

Perceive time differently than older people do. Our perception of time changes as we age — time seems to pass more quickly as we get older.

(cut here)

Generally learn quickly.

Are open to new information and will readily adjust their views.

(cut here)

Readiness to learn is linked to both academic development and biological development.

Learn (at least in part) because learning will be of use in the future.

(cut here)

Are often externally motivated (by the promise of good grades, praise, etc.)

Have less well-formed sets of expectations in terms of formal learning experiences. Their "filter" of past experiences is limited.

(cut here)

Perceive themselves to be doers — using previous learning to achieve success.

Depend upon themselves for material support and life management. Although they must still meet many psychological needs through others, they are largely self-directed.

Often have very different ideas about what is important to learn.

(cut here)

Learn best when they perceive the outcomes of the learning process as valuable — contributing to their own development, work success, etc.

Are very different from each other. Groups are likely to be composed of persons of different ages, backgrounds, educational levels, etc.

(cut here)

Are more concerned about the effective use of time.

Have a broad, rich experience base to which to relate new learning.

(cut here)

For the most part, learn more slowly, but they learn just as well. They also have the added advantage of superior judgment.

Are much more likely to reject or explain away new information that contradicts their beliefs.

(cut here)

Are more often internally motivated (by the potential for feelings of worth, self-esteem, achievement, etc.).

Readiness to learn is more directly linked to need — needs related to fulfilling their other roles and coping with life changes.

(cut here)

Are more concerned with the immediate applicability of learning.

Have well-formed expectations which, unfortunately, are sometimes negative because they are based upon unpleasant past formal learning experiences.

Concept Attainment Strategy

What is the Concept Attainment Strategy?

The Concept Attainment Strategy compares and contrasts items (sometimes called exemplars) that contain certain characteristics (sometimes called attributes) with items that do not contain those characteristics. It is a method of categorizing information — identifying and placing events into classes by using certain clues (criteria) and ignoring others.

Why Use the Concept Attainment Strategy?

The Concept Attainment Strategy helps students (a) recognize examples of key concepts or definitions, (b) use information to form and test hypotheses, (c) separate the relevant from the irrelevant, and (d) correctly explain definitions and examples.

When Should You Use the Concept Attainment Strategy?

Teachers can use this strategy to help students develop definitions correctly, separate important and unimportant information on any topic, and use critical thinking to determine relevant examples of a concept.

How to Use the Concept Attainment Strategy

This strategy includes three steps: presenting examples, refining understanding, and providing practice.

In the first step, the teacher should select a concept and organize exemplars into two groups: positive (those that are like the concept) and negative (those that are not like the concept). The teacher should present these as Yes and No exemplars.

In the second step, the teacher should ask students to describe the attributes of the concept after they generate a list of attributes from the exemplars. Students should then be able to name the concept.

In the third step, the teacher should ask students to identify additional exemplars of the concept.

Concept Attainment Strategy, continued

Things to Remember

1. Each positive exemplar must contain all the essential attributes of the concept.
2. Arrange the exemplars so that students can distinguish the essential attributes from the nonessential attributes.

References

Association for Supervision and Curriculum Development. (1987). Teaching strategies library: Research-based strategies for teachers. Alexandria, VA: Author.

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